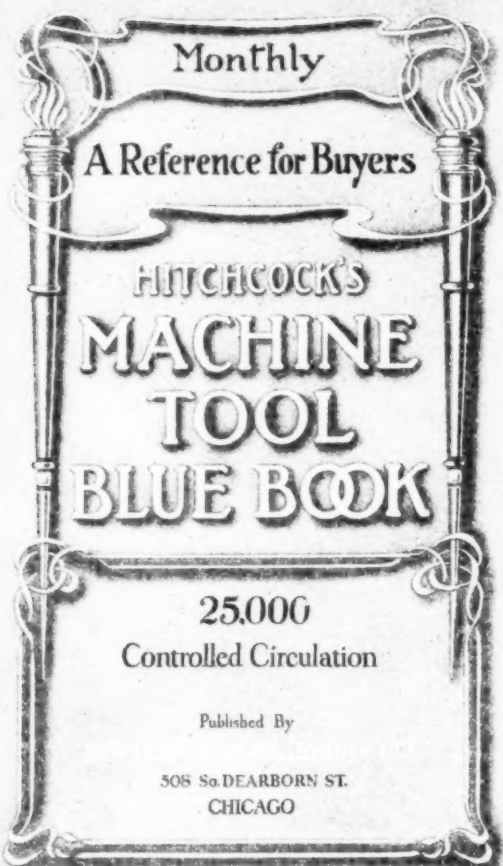


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Monthly

A Reference for Buyers

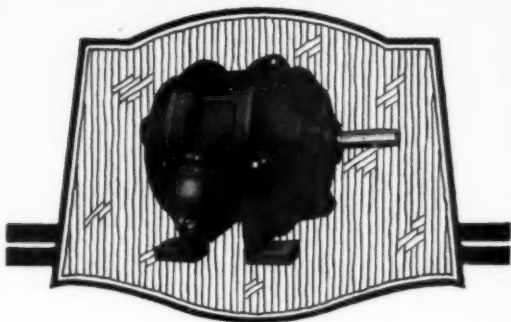
HITCHCOCK'S  
**MACHINE  
TOOL  
BLUE BOOK**

25,000

Controlled Circulation

Published By

508 So. DEARBORN ST.  
CHICAGO



Reliance Engineers have been actively identified with the development of motor drives for machine tools for over 20 years.

*You are invited to make use of this experience*

**Reliance Electric & Engineering Co.**  
1050 Ivanhoe Road, Cleveland, Ohio

*Branches:*

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*We specialize in motors, sizes 1/2 to 250 h. p. constant and adjustable speed D. C.; squirrel cage and slip ring A. C.*

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**RELIANCE <sup>AC</sup> <sub>DC</sub> MOTORS**

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## Order Your High Speed Drills from This Booklet

Recently a prominent shop superintendent gave orders that, hereafter, no one in his plant was to order "high speed drills," but always to specify "Cle-Forge High Speed Drills."

We'll cheerfully send you a copy of this booklet telling all about the famous "Cle-Forge" Drills. A request for it places you under no obligations whatever.

*The* **CLEVELAND** **TWIST DRILL COMPANY**  
CLEVELAND  
NEW YORK CHICAGO LONDON

TRADE MARK REG. U. S. PAT. OFF. AND FOREIGN COUNTRIES

### *Manufacturers, also, of*

Carbon and High Speed Drills for every purpose; "Mezzo" Super-Carbon Drills; Hand, Jobbers' and Shell Reamers; "Peerless" High Speed Reamers; "Paradox" Adjustable Reamers; "Quick-Set" Reamers; Chucking Reamers for Turret Lathes; Counter-bores; Countersinks; Sockets; End Mills; and the "Ezy-Out" Screw Extractors.

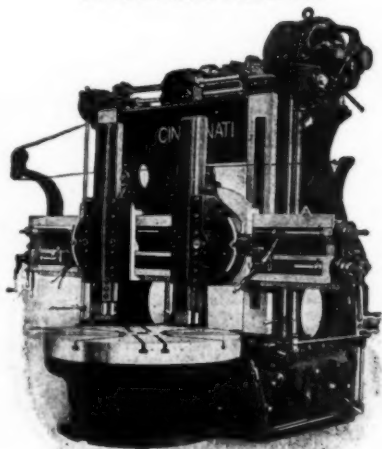
# CLE-Forge

TRADE MARK REG. U.S. PAT. OFF.

# Cincinnati Mill

Ease Of Operation  
Correct Feeds And Speeds  
Unlimited Power  
Steel Gearing  
Gravity Lubrication

Are A Few Of The Rapid  
Production Features



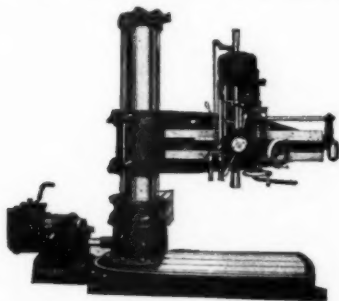
Built in Size 42 In. to 12 Ft.

**THE CINCINNATI PLANER CO.**  
CINCINNATI, OHIO, U. S. A.



# Fosdick <sup>Heavy Duty</sup> Radials

**Have the Power, Rigidity and  
Ease of Operation to Meet the  
Demands of the Most Exacting**



**Fosdick Heavy Duty Radials** are made in sizes 2 to 6 ft., for  $3/16$ " to 4" drills. They represent the most rigid and powerful type of Heavy Duty Radials built, are easy to operate, and drive high-speed drills to the limit of their endurance. They are designed to meet the demands of the most exacting users of tools of this kind. Also furnished in sizes 4, 5 and 6 ft. with variable speed motor on arm.

## ***There's a Fosdick for your needs***

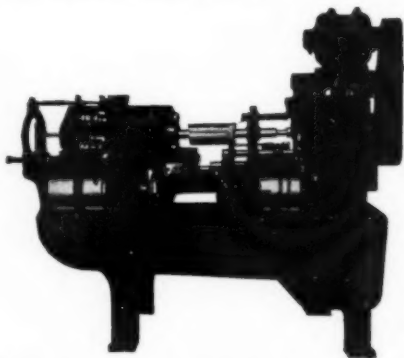
The Fosdick Line of High Grade Drilling Machines also includes High Speed Sensitive Radials, 3,  $3\frac{1}{2}$  and 4 ft., for drilling and tapping, capacity 1"; Heavy Duty Uprights, 21" to 30", capacity  $3/16$ " to 3"; and Ball Bearing Sensitive Drills, 1 to 6 spindle, capacity to  $1\frac{1}{8}$ ".

***Whatever your drilling needs, write to Fosdick,  
and you'll get the best the market affords***

**The Fosdick Machine Tool Co.**

**1638 Blue Rock St., Cincinnati, Ohio**

# You, too, Can Save on Your Bar Stock Parts



If you are interested in producing your bar stock parts at lower costs find out what the Model C, Five Spindle, Acme Automatic Screw Machine can do for you. It's built in 3 sizes:—9/16", 1", 1 5/8".

This new Acme has already saved thousands of dollars for representative concerns making parts from bar stock—and on hundreds of different parts.

Send B/P or Sample for Production Speeds on Your Work.

Address Dept. C. S.

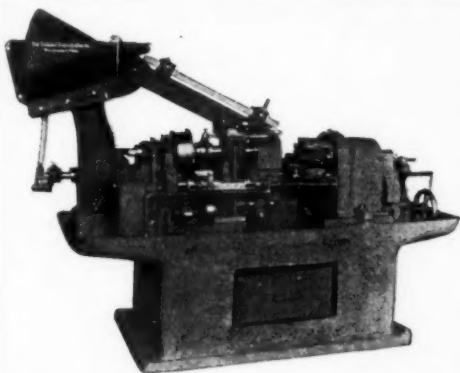
## The National Acme Co.

Cleveland, Ohio

New York

Detroit

Chicago



## **"This is Production"**

**2800 Pointed and Threaded  
 $\frac{1}{2}$ " Bolts Per Hour—  
One Operator!**

**WHEN USING**

**Four Economy Automatic Combined  
Pointing and Threading Machines.**

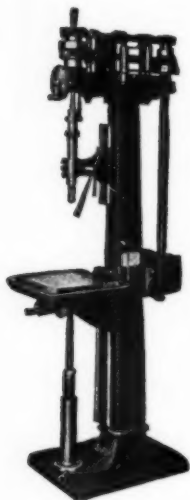
**Capacity  $\frac{1}{4}$ "x1" to  $\frac{3}{4}$ "x5 $\frac{1}{2}$ "  
Bolt and Cap Screws.**

**The Economy Engineering Company  
WILLOUGHBY, OHIO**

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**FOOTBURT**

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## **A Single Spindle Footburt Sipp Sensitive Drill**

**Made in three  
sizes of single  
and multiple  
spindle models**

### **More holes with this machine**

**Why? Because you can change speeds in two seconds or belts in ten seconds—because the automatic idlers keep the belt pulling to capacity at all times—because the full ball bearing equipment and accurate machining gives a smooth, fast cut.**

*Write for No. 650 Folders*

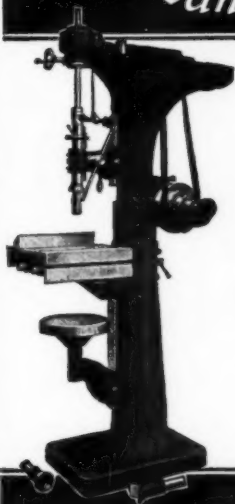
**The Foote-Burt Company, Cleveland, O.**

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**FOOTBURT**

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*All a drilling  
machine should be!  
~and more!*



Each detail of Avey construction has been perfected to meet the "acid test"—lowest cost per hole.

Avey machines give you full benefit of high-speed drills, minimizing breakage, increasing the holes per grind, speeding production and cutting power cost.

Find out how much *Avey performance* for drilling, tapping, countersinking and boring will save over present methods.

**The Avey Drilling  
Machine Co.  
Cincinnati, O.**

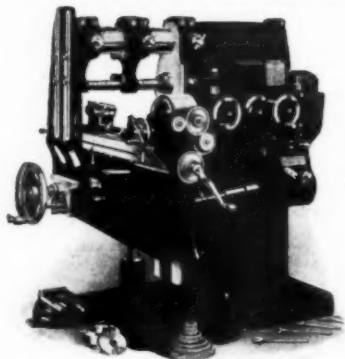
*Representatives in principal cities*



*Avey*  
for  
drilling machines

# **LeBLOND**

## **Heavy Duty Geared Milling Machines**



LeBlond Heavy Duty Single Pulley Drive Geared Milling Machines are simple, rugged, accurate machines best suited for the work of average shops. They are particularly adapted to tool room work and the work of jobbing or repair shops.

The one piece column, the box type knee, the exceptionally large overarm, and the self aligning arbor supports are a few of the distinctive features of these machines.

They are built in a complete line of sizes, in both plain and universal styles, and can be furnished with motor drive. Our catalogue, which gives complete description, will be sent to interested parties.

**THE R. K. LeBLOND MACHINE  
TOOL COMPANY**

**CINCINNATI,**

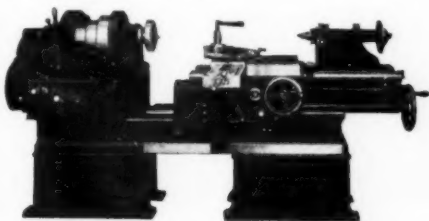
**OHIO**

# The Ideal Lathe

FOR

## Railroad or Jobbing Shops

Here is a lathe that is always ready for practically every job, without tearing down and setting up, and it is a real lathe on all of them. It is so sturdy in construction that it absorbs the vibration of the heaviest cuts.



### RAHN-LARMON

#### 18"/36" Extension Bed Gap Lathe

There is nothing else quite so satisfactory as the Rahn-Larmon Extension Gap where there is a variety of lathe work to be done.

It reduces to a minimum the amount of equipment required, saving in investment cost; it saves in operating time, reducing labor cost; and there's hardly a reasonable limit to the work you can call upon it to do.

Made in sizes 18"/36", 22"/40" and 28"/50" for belt or a. c. or d. c. motor drive.

*Let's compare notes. This may be just what you need. If not, there's no harm done.*

## The Rahn-Larmon Co.

CINCINNATI, OHIO, U. S. A.

**You can now buy a set of the  
Sebastian Diameter and Length Gauges  
to install on your Lathe**

**Saving 50%**  
average time  
on lathe jobs



**MAKE YOUR LATHE** into a Production Tool. The price of the attachment is very attractive and in some cases will pay for itself in two months' time.

**THE DIAMETER and Length Gauges** operate upon an entirely new principle. When you make one piece you notch out bar and wheels to conform to the finished sizes. That is all the "setting up" required. Eliminates use of calipers, scales and micrometers. The Gauges can be kept in the tool room and the same pieces quickly reproduced at any time within microscopical measurements.

*Write for further information. For Lathes from 12 to 20".*

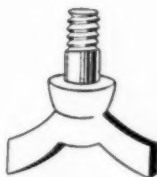
**The Sebastian Lathe Company**

1000 Culvert St., Cincinnati, Ohio



# Threading 1200 pieces per Hour

These brass wing  
screws shown are  
being threaded on  
our



## Standard High Speed Tapping Machine

*Let us show you what can  
be done on your work*

**Leland-Gifford Co.**

Worcester, Mass.,

U. S. A.



*Branch Offices:*

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# Cutter and Tool Grinders

For All Classes of Work

No. 12  
Cutter and Tool  
Grinder



The Nos. 10, 11 and 12 give a range of sizes that will take care of any kind of cutter and tool work as well as light cylindrical grinding.

*Let us recommend the proper sizes for your work*

**LANDIS TOOL COMPANY**

**Waynesboro, Pa.**

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Chicago Office: 618 W. Washington Blvd.



## **Grand Rapids No. 2 Universal Cutter, Tool and Drill Grinder**

*With Self-Contained Motor Drive*

An ideal machine for the shop whose requirements do not demand larger or single-purpose machines.

As a drill grinder it gives equal lengths and correct angles to the cutting lips, with proper clearance, etc., insuring maximum drilling capacity.

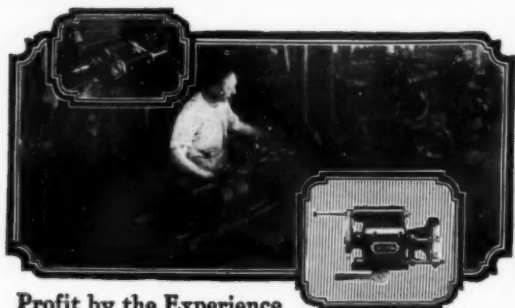
And it grinds with the highest efficiency any type of cutter, reamer, etc., that any grinder will handle with its special equipment, within its capacity as to size.

*Write for the Bulletin*

**Gallmeyer & Livingston Co.**

342 Straight Ave., S. W., Grand Rapids, Mich.

Manufacturers of Grand Rapids Drill Grinders, Cutter and Tool Grinders and Tap Grinders. What do you need?



## Profit by the Experience of the Nelson Tool Company

**T**HE Nelson Tool Company, New York, prominent makers of tools and dies, have for several years been using Dumore grinders with the utmost satisfaction. They recently told us that in some cases the Dumore grinders could be used to much better advantage than any other grinder of similar character.

Why not profit by the experience of the Nelson Tool Company and other famous users whose high standards of workmanship are so well met by Dumore grinders? If you make jigs, dies, gages or other hardened tools—simple or intricate—you can depend upon Dumore grinders to fulfill *your* every requirement just as efficiently and satisfactorily.

Six styles and sizes—with individual speed ranges—provide a grinder with the correct cutting speed for any grinding need. Dynamic balance and smooth operation of Dumore grinder motors eliminate vibration. Ability to operate on either alternating or direct current, assures constant usage of these tools in plants supplied with two varieties of power current. Portable, they can easily be taken to the job—saving the cost of tearing down expensive set-ups.

These are but a few of the advantages of Dumore grinders. Our new catalog gives complete information on *all* their advantages. Send for this interesting book. You may learn a hint or two that will prove mighty valuable.

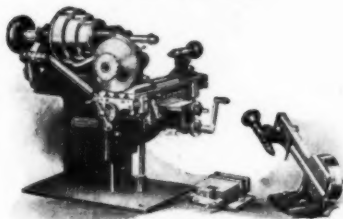
Wisconsin Electric Co., 43 Sixteenth St., Racine, Wisconsin

# DUMORE HIGH SPEED GRINDERS

# HARDINGE

## Milling Economy!

With All Conveniences and a Wide  
Range of Feeds, This Miller Affords  
You Real Savings



**Cataract Bench Milling Machine**

Many years of practical experience taught the designers and builders of this Bench Miller just what ought to go into a machine of this sort. You will find it unusually useful, doing its work with precision accuracy, and having available a wide range of feeds for practically all jobs that come within its range.

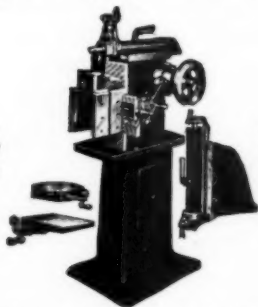
*Complete data and the interesting  
price gladly sent you on request*

**Hardinge Bros. Inc.**  
4149 Ravenswood Ave.  
Chicago, Ill.



# The Ideal Machine *for* Light Shaping and Slotting

7 in.  
Shaper  
Stroke



3½ in.  
Slotter  
Stroke

## The Rhodes Shaper and Slotter

It costs much less than larger high grade shapers, purely on account of its size.

It is better adapted to making tools, dies, models, etc., and to do all light shaping and slotting, because it is more readily manipulated on work within its capacity.

Furnished separate in the floor and bench types, and in combination in the floor type only.

*Ask your dealer or write for  
CATALOG H22*

**The Rhodes Mfg. Company**  
984 Park Road,    :-    Hartford, Conn.

SHAPERS—RHODES—SLOTTERS

# Tapping Revolutionized!

One user reports a 300% increase in production.  
Making good in many of the biggest plants in U. S.

"Let AIR do  
it—"

This machine  
automatically  
carries out the  
principle of  
hand tapping.



High Speed  
Pneumatic  
Oscillating  
Tapping  
Machine

We make  
guaranteed  
production  
estimates.

W. GATERMAN MFG. CO., Manitowoc, Wis., U.S.A.

# **PEERLESS SURFACING MACHINES**

*for*  
**Grinding and Finishing  
Flat Work**

**4' Bench  
Model**



**Larger Machines in Both  
Horizontal and Vertical Styles**

***SEND FOR FOLDER***

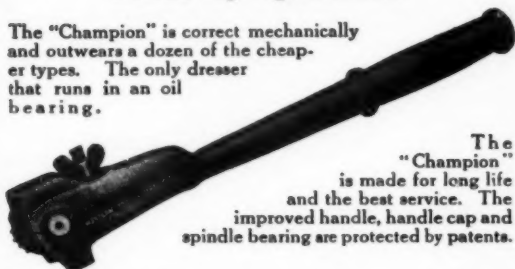
**PEERLESS SURFACING MACHINE CO., Inc.**  
**TROY, N. Y.**



# **"Champion" Emery Wheel Dresser**

## **Made by Specialists**

The "Champion" is correct mechanically and outwears a dozen of the cheaper types. The only dresser that runs in an oil bearing.



The "Champion" is made for long life and the best service. The improved handle, handle cap and spindle bearing are protected by patents.

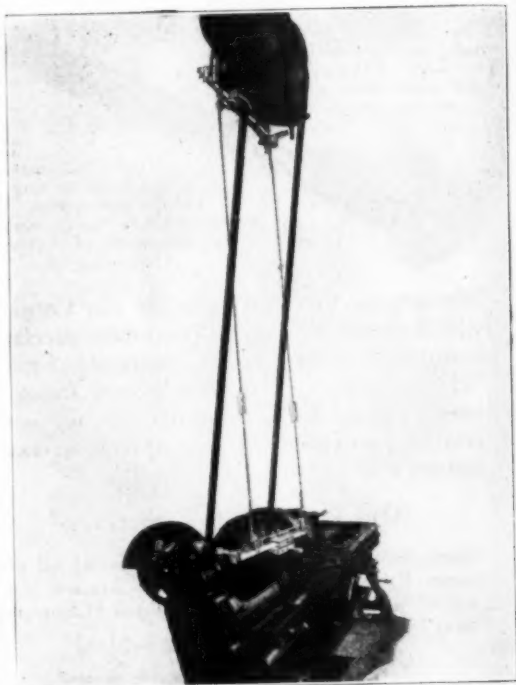
We suggest that you write for our Catalog, which explains in detail the many excellent features of this highly improved Emery Wheel Dresser. Those who are using it would never be without it, and we want you to know why it has proven so satisfactory everywhere.

### **Our Catalog also describes**

Champion Tool Holders for practically all purposes, Expanding Mandrels, Machinists' Vises and Clamps, etc., and our large line of Champion Shop Furniture.

*Your copy of Catalog is ready to mail  
How shall we address it, please?*

**The Western Tool & Mfg. Co.**  
**Springfield, Ohio**



**REZNOR QUICK-ACTING SAFETY BELT SHIFTER**  
as applied to a Lathe



*For forty years a mark of excellent product*

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**I**T IS AN HONEST FACT—when a lathe or other cone pulley machine is equipped with the **REZNOR QUICK ACTING SAFETY BELT SHIFTER**, the operator shifts to the *best* speed as easily and unconsciously as you shift the gears on your automobile!

The result is a substantial gain of productive time which you are now losing by depending on shifting by hand or by hit-and-miss devices.

How big this loss is in your plant annually cannot be guessed at, but you can easily see what you can save, by placing a **REZNOR** shifter on one of your important lathes on our 30 day trial plan.

## **THE REZNOR**

### **QUICK-ACTING SAFETY BELT SHIFTER**

is today in use in many Nationally prominent plants. It is fast and efficient. It is dependable and durable. It is safe, positive and cannot damage belt. It will pay for itself many times in your plant. It requires no other guard on a lathe in the State of Pennsylvania.

**WRITE US TODAY** for descriptive circular  
and our **30 DAY TRIAL** proposition

**REZNOR MFG. CO., Mercer, Pa.**

## The "Utility" Removable Taper Shank Will Cut Your Costs

**A Detachable  
Taper Shank  
for  
Straight  
Shank  
Tools**



Designed to be used with all Straight Shank Tools, and represents the taper shank commonly used in solid or one-piece taper shank tools, such as drills, reamers, etc. Thoroly efficient, it will cut your tool costs. CATALOG?

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6469 Epworth Blvd.  
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## Winterhoff Tool and Disc Grinders

**No. 2 Combination Grinder and Disc Grinder**

DRILLS  
GRINDERS  
DISC GRINDERS  
SAWS  
SANDERS  
All Motor  
Driven



**Price  
\$45**  
F. O. B. Elkhart

An ideal tool for the tool room for finishing die blocks or any flat surface discing. Equipped with 6" by 1/2" tool grinding wheel, wheel guard and tool rest, 8" disc wheel, tilting table and protractor guide, 1/4 h. p. motor 1750 r. p. m. Also made in Plain Grinder model at \$30.

*Send for circulars describing these machines or see your dealer*

**Winterhoff Tool & Machine Co.,** 109 South Elkhart Ave.,  
ELKHART, IND., U.S.A.

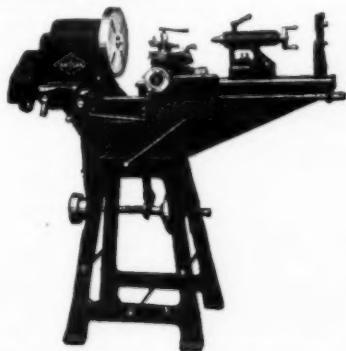
# Don't Be Misled!

**"The Small Lathe with the BIG PUNCH"**  
is a **REAL** machine tool in every sense of  
the word. Find out for yourself—

IF any other Lathe, within \$150.00 of its price,  
will turn out as great a volume or variety of actual  
Lathe-work.

IF any other Lathe, within \$300.00 of its price, is  
more modern in design, more compact in con-  
struction, or more distinctive in finish and general  
appearance.

IF any other Lathe, **AT ANY PRICE**, is backed  
by a more dependable guarantee of complete  
satisfaction to the purchaser.



Isn't it worth your while to at least have full par-  
ticulars of this machine before you, if your work  
comes within its unusual capacity?

*Think it over. Then write to—*

**Artisan Manufacturing Company**  
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## **SIMPLEX-M Abrasive Band Grinders**



**For Roughing, Smoothing and  
Fine Finishing**

**Produces Straight Grain  
Surface and Sharp Edges**

**Used on Metals,  
Woods and Compositions**

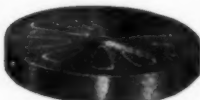
*Send for literature of various styles and sizes*

**Walls Sales Corp., 96 Warren St., N. Y.**

### **They Save Much Time and Labor—**



**The "D & W"  
Flat and Rotary  
Magnetic Chucks**



**You Will Find** our line a revelation in practical efficiency. They hold an immense variety of steel and iron pieces for grinding, planing, shaping, milling. When large quantities are to be machined, the time and labor saved with a "D & W" as against old methods, will very soon pay the entire cost of the chuck. Our attachments convert a flat chuck into a Vertical, Taper or Swiveling type, as wanted.

*Special Chucks to order. Folder and price list on request.*

**J. & H. Electric Co.,** 161 Clifford St.,  
Providence, R. I.

# Don't Forget This

## Precision Truing Tools

will cut down your cost of truing grinding wheels.

The wheel is trued more quickly—the wheel pores are opened up better, hence will grind more pieces before requiring truing again.

THE SAVING IS ALL PROFIT TO YOU

## WHEELS

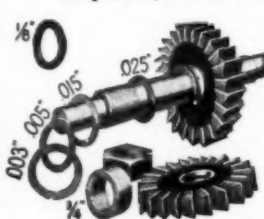
Our truing wheels are especially made for truing and are superior for this work.

We also make small grinding wheels, 6-inch diameter and less.

**The Precision Truing Machine & Tool Co.**  
CINCINNATI, OHIO

# Steel Spacing Washers—

Made of a good grade of Cold Rolled Strip Steel, also known as Shim Steel



Stock sizes for arbors of following diameters:  $\frac{3}{8}$ ,  $\frac{1}{2}$ ,  $\frac{5}{8}$ ,  $\frac{3}{4}$ ,  $\frac{7}{8}$ , 1,  $1\frac{1}{8}$ ,  $1\frac{1}{4}$ ,  $1\frac{3}{8}$ ,  $1\frac{1}{2}$ ,  $1\frac{7}{8}$ ,  $1\frac{3}{4}$ ,  $1\frac{1}{2}$ , 2,  $2\frac{1}{4}$ ,  $2\frac{1}{2}$ , 3,  $3\frac{1}{2}$  and 4 in. and larger.

Stock thicknesses: .002, .003, .004, .005, .006, .007, .008, .010, .012, .015, .020, .025, .032, .047, .063, .093 and .125 inch.

Other thicknesses up to 3.000" made to order, with keyways if so ordered.

Ask us to send samples; you'll like them

**Detroit Stamping Company**  
3443 West Fort St., Detroit, Mich.

## Save Time Setting Gang Milling Cutters

Eliminate  
Thin  
Washers



Hardened  
and  
Ground

PATENTED

**"Wear-Ever" Adjustable Spacing Collars** permit setting cutters to the thousandth part of an inch without removing from the arbor.

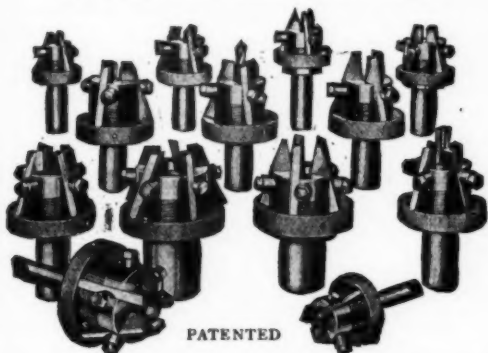
Stock sizes for  $\frac{3}{4}$ " to  $2\frac{1}{2}$ " arbors, sent on approval  
They are adjustable in 12 steps of  $\frac{2}{1000}$  inches

**SCULLY-JONES & CO. TOOL DIVISION**  
13th and Robey Streets CHICAGO, ILL.



# Solid Tools Outclassed—

By Genesee Adjustable Hollow Mills



**THEY'RE SUPERIOR**—Because the 7 sizes cover the entire range from  $\frac{1}{8}$ " to 2", which ordinarily requires hundreds of solid tools;—because one set of blades outlasts three to five solid tools, and can then be replaced at small cost.

**THEY'RE SUPERIOR**—Because they are ideal for finishing castings, forgings, etc., and more economical than non-adjustable mills for every purpose. Genesees cut up to 15" a minute in steel. They are stronger than solid tools and cannot change in size.

**NOW MADE** in six different styles, from the heavy roughing Style "B" to the accurate finishing Style "F." We also make Style "N" Mills for all Brown & Sharpe automatics, and special sizes and styles to your order. You will find them—

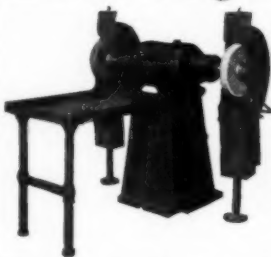
*All real cost reducers. Write us about your needs.*

**Genesee Manufacturing Co., Inc.**  
**Rochester, N. Y., U. S. A.**

*Manufacturers of Genesee Rapid Production Tools.*

**Est. 1908**

# CISCO Polishing, Buffing and Grinding Lathe For BIG production



Push button control, quick acting brake, a cool motor with frequency changer, perfect oiling and entire absence of vibration are important factors in Cisco's larger productive capacity.

Direct motor drive, self-contained and ball bearing. Vital parts protected against all dirt. 3, 5, 7½ and 10 h. p.

*Write us today for  
circular and prices*

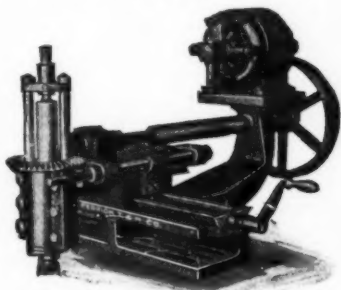
**The Cisco Machine Tool Company**  
1700 Elmore St., Cincinnati, Ohio



## FEDERAL DIAL INDICATORS

*Without a Pedrick*  
**Portable Milling Machine**

**You Often Pay Its Price  
In Delay On One Job**



To appreciate its value just add the savings you could effect in a year by taking this handy, ever-ready tool to the job instead of bringing the job to the tool, then subtract the price. Result—net earning power.

**You need this Pedrick Miller to do those big jobs that your standard machines cannot handle.**

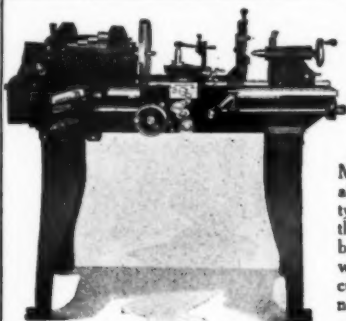
Catalogue explains all its various operations—a comprehensive book of reference and key to manifold savings. Your copy is waiting—shall we send it now?

**Pedrick Tool & Machine Co.**

Headquarters for Portable Machine Tools  
Boring Bars, Crank Pin Turners, Pipe Benders, etc.

**3644 N. Lawrence St.,**

**Philadelphia, Pa.**



## Another Sidney Lathe

Our 11" x 4'  
Medium Pattern,  
all geared head  
type. It is up to  
the minute with  
built-in features  
which insure ac-  
curacy and eco-  
nomical service.

*Write for catalog and prices on the complete  
line of Sidney Lathes. Address Dept. 1801*

**The Sidney Machine Tool Co.**  
Sidney, Ohio

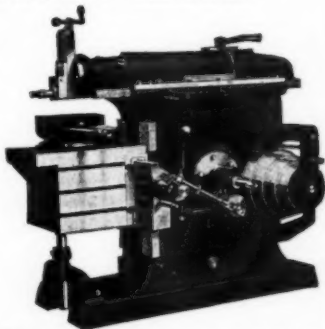


## SHAPERS

12", 14", 16"  
Plain Crank,  
16", 20", 25"  
B. G. Crank,  
either Cone  
Driven or  
through Speed  
Box.

Belt Shifter  
Regular Equip-  
ment All Cone  
Driven Shapers.

32" Back Gear-  
ed Crank, Sin-  
gle Pulley  
Drive.



**The Smith & Mills Co., Cincinnati, O., U.S.A.**

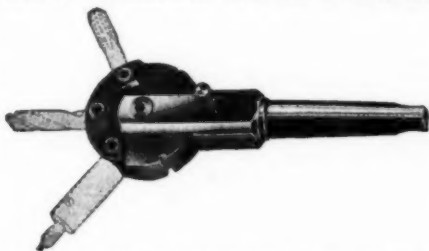
## E-Z Set Boring Tool



It costs less to use an E-Z SET BORING TOOL. Tool or production work on Milling Machine, Boring Mill, Drill Press, Screw Machine or Lathe. Large boring capacity. Rigid, positive adjustment, actuated by a worm; made in three sizes.

*Send for Circular*

## M-P Three Tool Turret



Your lathe, with this THREE TOOL TURRET, will be more efficient than a screw machine on small lots or special jobs where there is considerable turning and threading.

*Send for Circular*

*Manufactured by*

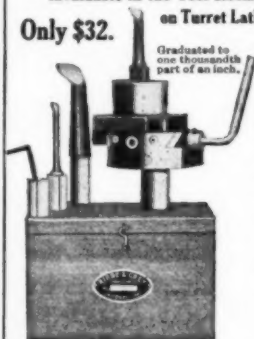
**The Maxwell Products Co.**

Ottawa & Indiana Ave.,

Cleveland, Ohio

## R & G Adjustable Boring Tool

Invaluable in the Tool Room and on Production Work  
on Turret Lathes, Horizontal Mills, Etc.  
**Only \$32.**



It saves time and insures accuracy in boring jig plates, dies, etc., on milling machine table and drill press, that cannot be handled on the lathe. It readily trues to size holes drilled on turret lathe.

Instantly adaptable to universal chucks. Straight or taper shank holders easily fitted for mounting to any machine spindle.

Send us your order or write for complete description of this handy, time-saving outfit.

**Ribbe & Grey**  
La Porte, Ind.

## ARMSTRONG DROP FORGED WRENCHES

High-Grade Wrenches of All Kinds and Sizes



*We also make—all of Armstrong quality—*

Tool Holders	Drill Vises	Bolt Drivers
Ratchet Drills	Lathe Dogs	Tool Posts
Drilling Posts	Clamps	Drill Sleeves
Drill Drifts	Planer Jacks	and Sockets

*Write today for free Catalogs*

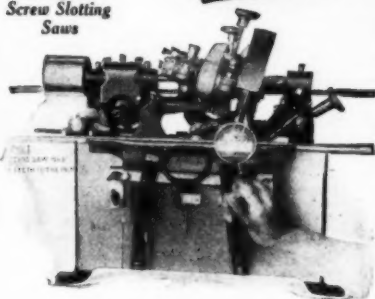
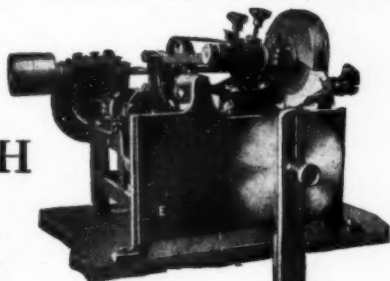
**Armstrong Bros. Tool Co.**

THE TOOL HOLDER PEOPLE

308 N. Francisco Ave., Chicago

# BUILT TO SALVAGE FINE TOOTH SAWS AT **5¢** EACH

**Model E**  
*Salvages all  
Cold, Milling,  
Slitting and  
Screw Slotting  
Saws*



**Model A-2**  
*Reclaims  
all  
Hard, Soft  
or Medium  
Tempered  
Band Saws*

**THEY WILL MAKE  
YOU A 75% SAVING**

WRITE FOR CATALOG

**THE WARDWELL MFG. CO.**

Specialty Manufacturers of the largest line of Saw Filers made in the U. S. A.  
108 Hamilton Ave., Cleveland, Ohio

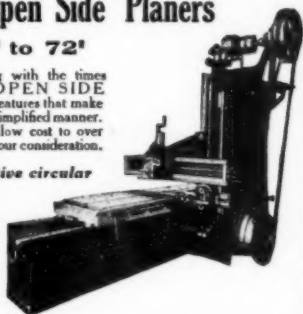
## Cleveland Open Side Planers

26' to 72'

Progressively advancing with the times CLEVELAND OPEN SIDE PLANERS have the features that make for ease of operation in a simplified manner. Quantity production at low cost to over 1060 users is worthy of your consideration.

*Send for descriptive circular*

Automatic Trip to Rail  
Raising Mechanism;  
Herringbone Gears for  
First Reduction; Im-  
proved Head Clamp;  
Power Rapid Travers-  
ers; Box Tables;  
Single Turn Rail  
Clamp.

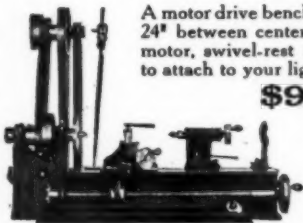


The Cleveland Planer Co., 3148 Superior Avenue,  
CLEVELAND, OHIO

*Established in 1900*

## Just-Rite Lathes

Made in Sizes from 10-in. to 20-in.



A motor drive bench lathe, 10" swing, 24" between centers, complete with motor, swivel-rest and pan, ready to attach to your light socket.

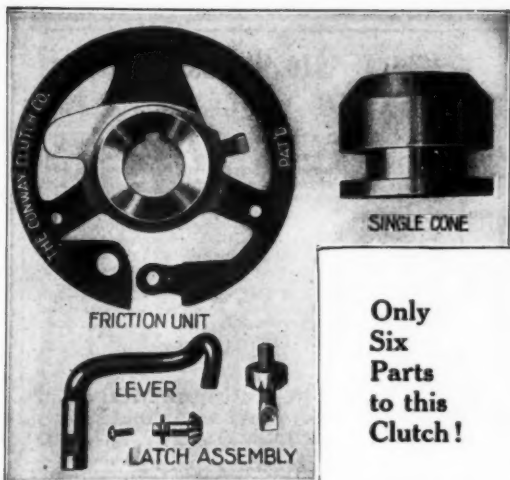
**\$98**

**JUST-RITE**  
for turning,  
boring, mill-  
ing and drill-  
ing (not screw  
cutting).

Order one by express. Weight, 230 lbs.

A. V. Carroll Machine Tool Co., Norwood,  
Cincinnati, O.





**Only  
Six  
Parts  
to this  
Clutch!**

## The Conway Leads in Simplicity

*The picture shows the Conway CMT Clutch disassembled. Only six parts! Could anything be simpler, stronger, less liable to fail in service?*

*This analysis indicates its dependability, but not its efficiency, a merit not easily put into words, though the one thing that counts when you buy a clutch.*

*But the advantage of simplicity, and its bearing upon performance, are easily recognized. The power moves from live to driven shaft directly, and without loss.*

*These few sturdy parts are utterly reliable, and will stand up even under a sudden overload. They look strong; they are strong; they are efficient, because efficiency is the natural effect of combining simplicity and strength.*

*It is worth while to know the Conway. Let us tell you more.*

**The Conway Clutch Company**  
1951 Riverside, Cincinnati, Ohio,



## 3 to 30 Gals. per Minute!

### With GUSHER Pumps

WITH A MINIMUM of power these Machine Tool Coolant Pumps operate at maximum efficiency. And they stand the wear of constant use in a way that will agreeably surprise you. They are ball bearing.

"GUSHERS" have no gears, no foot or relief valves, no packing nuts, need no priming, and are not injured by grit or small chips. Their sturdiness is noteworthy.

"GUSHER" capacities are 3 to 30 gallons per minute. Furnished with individual motors for any current, also for belt drive.

*Get the Catalog and prices*

**The Ruthman Mch. Co.**

528-534 E. Front St.

CINCINNATI,

OHIO



## Ideal Air Compressor And Exhaust Pump

The single cylinder pump delivers two cubic feet of free air at 300 R. P. M. Quarter H. P. motor required for 200 lbs. pressure.

**Price, pump only, \$24.50.**

← SINGLE CYL.  
TWIN CYL. →

The twin cylinder pump delivers four cubic feet of free air at 300 R. P. M. Half H. P. motor required for 200 lbs. pressure.

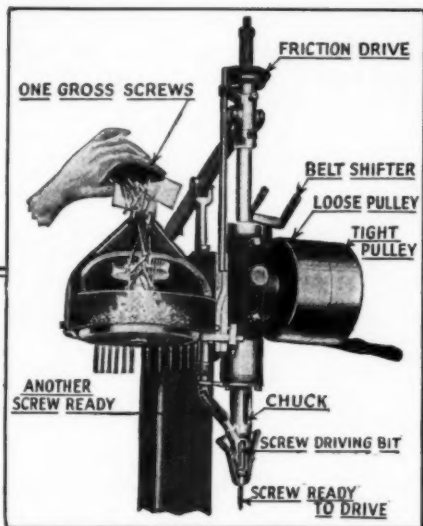
**Price, pump only, \$32.50.**

*Full particulars upon request*

**Petrick Brothers**

2226 Belmont Ave., Chicago, Ill.





Magazine Feed of the Reynolds Automatic Screw Driver

## Magazine Feed Screw Driving Pays

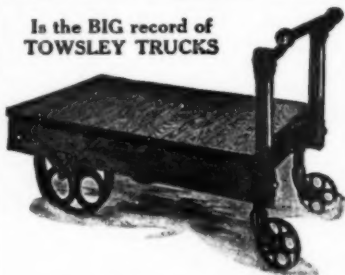
REYNOLDS Automatic Screw Driving Machines, with Magazine Feed, drive screws so economically that many users find they pay for themselves three or four times every year. Just keep the hopper filled—no handling of screws beyond that—a boy or girl can operate them. They drive screws of practically every kind—anything that can be magazined—and it **PAYS** to use them.

Let us post you. Send us first, please, dimensions over all of your work, with length and gauge of screws used.

**The Reynolds Machine Company**  
 Dept. H. H., Massillon, Ohio

## 500% Annual Dividends

Is the BIG record of  
TOWSLEY TRUCKS



### TOWSLEY TRUCKS

repay their  
cost every  
two to three  
months.

Let us tell  
you how.

Made in  
every style  
for every  
need.

*Write us about this profitable investment!*

**John T. Towsley Mfg. Co., Cincinnati,  
Ohio**

## Complies With Safety Laws!



### Canton New Safety Friction Load Brake

Furnished at small extra cost  
on all "Canton" Portable  
Cranes, Hoists and Trucks,  
and easily applied to those  
already in service.

This Brake holds the load at  
any point, making it impos-  
sible for the load to get away  
from the operator. It's great  
safety insurance!

"CANTON" CRANES are made in  
several sizes. Write for  
Booklet E-8.

**CANTON FOUNDRY & MACHINE CO., Canton, Ohio**

New York Office: 203 East 15th Street, Second Floor

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# TRIBLOC CHAIN HOISTS



**For "throttled"  
departments**

When large railroad and industrial plants choose Tribloc Chain Hoists for their shops, it is a choice based on confidence in the ultimate economy of these hoists—established by proved records of performance.

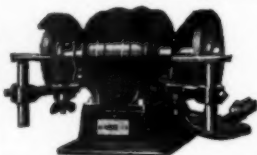
Let us tell you how you can make these sturdy load lifters assist in "unthrottling" clogged departments by speeding the movement of work from "floor to floor."

*Send for Catalog 7-B*

**FORD CHAIN BLOCK CO.**  
2nd and Diamond Sts.,  
Philadelphia, Pa.

## Sharp Tools—

Put Money in Your Pocket



### A BODINE Portable Electric TOOL GRINDER

—placed in every department of your plant, will save you being robbed by dull tools.

MECHANICS like to handle "Bodines," and if you will place them throughout your plant so one is handy to the various workmen, production will *never slump* from dull tools.

THE "BODINE" is as nearly mechanically perfect as we know how to make it. It is equipped with SKF ball bearings, heavy wheel guards, tool rests adjustable to any position, an ideal oiling system, etc. *Write for full details.*

**The Bodine Electric Company**  
2256 West Ohio St., Chicago, Ill.

## No More Dull Tools—



Where the up-to-date, improved

### Thompson Universal Grinder

is used. Does practically all kinds of grinding quickly, accurately and at lowest cost—plain, surface, edge, die, cutter and internal.

Capacity: 10" x 36"

*Write for Bulletin  
and price today*

Manufactured By  
**THE THOMPSON GRINDER CO., - Springfield, Ohio**



For grinding and polishing metal, wood, fibre, etc., this Belt Grinder quickly secures flat surfaces, straight sharp edges and saves hand filing. Motor driven from lamp socket. Two sizes.

*Ask about its novel features.*

**PORTER-CABLE MACHINE CO., Salina St., SYRACUSE, N.Y.**



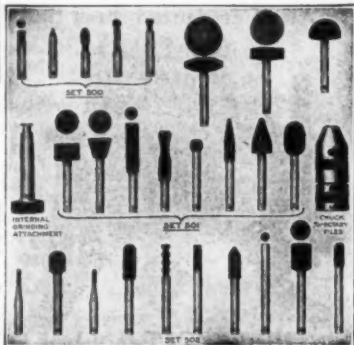
## **Strand Rotary Files**

Used with Strand Flexible Shaft Machines. Are giving excellent service.

*Write for Catalog*

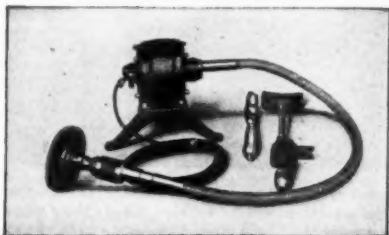
**N. A. Strand & Co.  
5001 No. Lincoln St.  
CHICAGO**

## **HIGH SPEED HAND CUT ROTARY FILES**



## The Whirlwind Buffer and Grinder

Will cut the cost on any unhandy  
grinding or polishing job



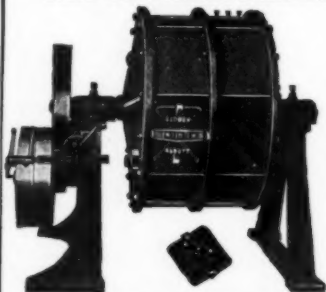
*Send for our latest bulletin*

**Stow Flexible Shaft Co.,** 3454 Ludlow St.,  
Philadelphia, Pa.

*The Best Since 1876*

## Abbott Burnishing Barrel

And Carbonized Steel Ball Process



**Let us  
burnish**

samples of your  
small metal  
parts, and fur-  
nish time and  
cost estimates.

Quality is high,  
and cost is bed-  
rock.

*Send us  
your samples*

**THE ABBOTT BALL COMPANY**  
Elmwood District, Hartford, Conn.



**THIS  
MACHINE  
RECLAIMS  
CUTTING  
OIL**



**Write!**

**TOLHURST Chip Wringers reclaim  
6 to 15 gallons per load and handle  
three or four loads an hour!**

**Tolhurst Machine Works**  
Tray, New York

**RECLAIM YOUR OIL AND CUT THE  
COST!**



**It's Simple Arithmetic**

The saving in 20 installations averaged 2.17 gallons of oil per 100 lbs. of chips, after draining.

**The Curtis Oil Extractor**

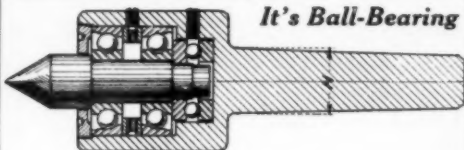
shown in this picture, holds about 250 lbs. of chips. Figure for yourself the oil saving from each full load. *It's a safe investment with amazing returns.*

The Curtis Centrifugal Oil Extractor is made in two sizes, belt or motor drive. The illustration shows our larger size, with motor on spindle.

No. 500 — Cap.: 1.7 Bushels

*Write for Catalog and Prices*

**The Leon J. Barrett Company**  
Grafton St., Worcester, Mass.



*It's Ball-Bearing*

## *The Improved* **"ALIVE" Tail Stock Center**

Here is the modern way to eliminate tailstock center troubles—burnt centers, enlarged holes, inaccurate work. The Norma Precision Bearings in this tailstock center carry both radial and thrust loads, and maintain accuracy while permitting of the highest speed the tool will stand.

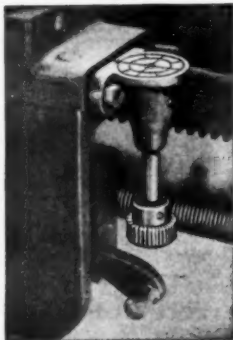
**STOCKED IN EIGHT STANDARD SIZES.**

Special sizes made to meet special requirements.

*Write for Bulletin on Prices and Specifications*

**Kell Manufacturing Co.,** 109 Tichenor St.,  
NEWARK, N. J.

## **E-Z THREAD DIAL** **Cuts Cost of Thread Cutting**



on all sizes of

## **Engine Lathes**

This new device also increases your efficiency in thread cutting.

Eliminates stopping or reversing the lathe.

Saves cost of backing belt and the power to drive it.

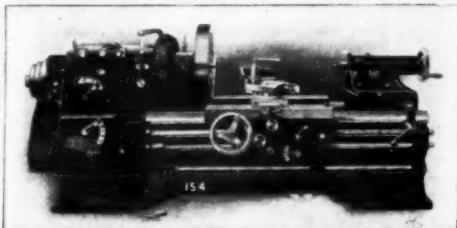
Fast growing in popularity.

*Write for folder today!*

**JAMES M. COLVEN**

20 Wolfe Street, Yonkers, N. Y.

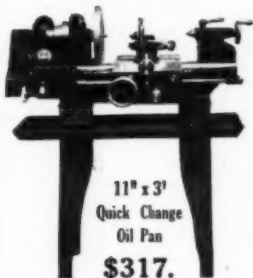
## CINCINNATI LATHES



are furnished either Cone Type or Geared Head, sizes 16" to 30" inclusive. Our single pulley belt drive lathes can be converted over to motor drive any time after installation. If you want longest guaranteed service and a lathe that covers every practical requirements always most conveniently, our latest catalog and prices will interest you.

**THE CINCINNATI LATHE & TOOL CO.**  
3207-3211 North St., Oakley, Cincinnati, O.

## Monarch Jr. Lathes



are the smallest members of the Monarch lathe family. Yet they are the "biggest little lathes" built.

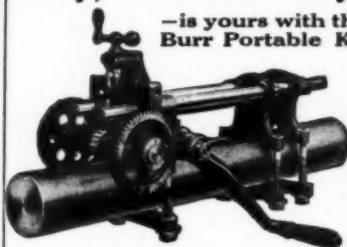
The Monarch line of lathes includes all sizes and types from the little 9-inch Junior lathe to the big, massive 30-in. lathe. In this line there is a lathe to fill your requirements at the price you want to pay.

*Send for Catalog*

**The Monarch Machine Tool Co.**  
206 Oak Street, Sidney, Ohio

## Easy, Low Cost Keyseating

—is yours with the handy  
**Burr Portable Keyseater**



No need now to dismantle your shafts and machines. A "Burr" cuts accurate keyseats up to 12 in. long in shafting up to 5 in. diam. with no trouble or any resetting.

**Over Nine Thousand in use today!**  
Your choice of seven sizes. A single emergency job often pays for it. Write to

**JOHN T. BURR & SON**  
422 Kent Ave., Brooklyn, N. Y.

## Does The Work That is Expected

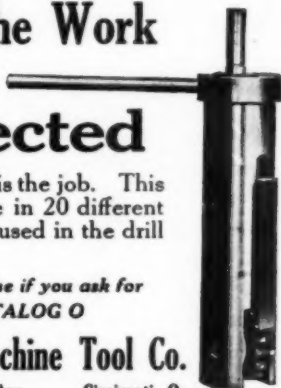
Keyseating is the job. This tool is made in 20 different sizes and is used in the drill press.

*You are wise if you ask for*  
**CATALOG O**

**National Machine Tool Co.**

2268 Spring Grove Ave.,

Cincinnati, O.



# The Rapid CATLIN Keyseaters

Reduce Shop Costs Everywhere



*Let us have your inquiry today. We shall be glad to answer questions and to mail you an interesting folder. Why postpone?*

*Successful in  
Automobile Plants  
Government Shops  
Navy Yards  
and many big  
Domestic and  
Foreign Factories*

Whether you need one keyseat or a thousand, the rapid "Catlin" will cut them to even better than 1000th of an inch accuracy. And its great speed explains its great economy. It cut a keyseat 6" long, 1" wide and 7/16" deep in a cast steel hub, in 3 minutes; this was in ordinary shop practice, with no attempt made to establish a record.

The picture shows the No. 1 Catlin, belt driven, with three-step cone pulley. Our other sizes, for belt or motor drive, cover practically all keyseating requirements.

## Chattanooga Machinery Company

2401 Bennett Ave., Chattanooga, Tenn.



Style "WC"



Style "O"



The Hinge



Style "G"



Style "A"

### Gits Gravity and Wire Wick Feed Oilers

**Gravity Feed**—flushes the bearing.

**Wire Wick Feed**—gives desired prolonged feed.

**Wire Wick**—replaces waste or felt.

Made in Standard sizes.



Style "L"

**Write for Catalog No. 21**

Showing 255 full size illustrations with detail dimensions.



Style "KV"

### GITS OIL CUPS

Oil cups for every lubricating need. State style and size in which you are interested, and we will send free samples and catalog.

**GITS BROS. MFG. CO**  
1940 SO. KILBOURN AVE., CHICAGO



Style "T"

## Less "Walk" and More "Work"

**Increases Output and Lowers Costs**



You manufacture small articles from round bar stock—on a turret lathe, for instance. Where do you keep the stock? Is it handy? The quick, easy, step-saving and time-saving way is to have two or three of—

### "The Handiest Racks"

—filled with bar stock, where you can lean across and pick it up without delay. They save time and space, and keep stock neatly piled and assorted.

*Shipped promptly on trial*

**Wm. S. Yohe Supply Co.**

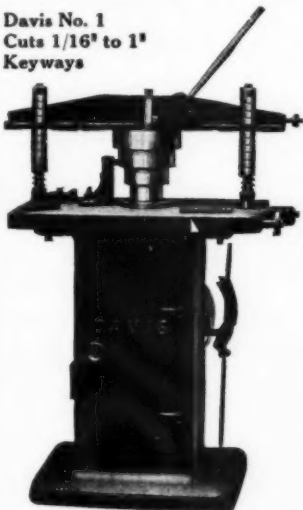
503 Mahoning Road, N. E.,

Canton, Ohio

# Rapid Keyseating—

In Quantity or in Small Lots

Davis No. 1  
Cuts  $1/16"$  to  $1"$   
Keyways



Cutting Keyway in Cone Pulley

## THE DAVIS

has the  
speed for  
economical  
production  
of standard  
parts.

## THE DAVIS

can be  
set up  
quickly  
in the  
general  
shop for  
all sizes  
of keyways  
within its  
capacity.

**The Davis** is simply constructed, is difficult to get out of order, and is easy to adjust and operate. It is a rapid and economical producer of accurate keyways under all conditions.

**Write for folder**, which describes it fully, with a table of cutting time that tells its own story.

**Davis Keyseater Company**

255½ Mill St., Rochester, N. Y., U. S. A.

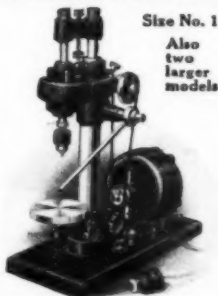
## The Muehlmann Sensitive Drill

**A masterpiece of  
the tool makers' art**

Produced by specialists for over 30 years in small precision tools, the one word which best describes the "Muehlmann" is **QUALITY**.

It has the "feel" necessary for drilling holes down to .010", with the sturdiness to speed up production work 25 to 100 per cent beyond the ordinary.

Let us tell you why users like it and what they say about the Muehlmann precision drill.



Size No. 1

Also  
two  
larger  
models

**Adolph Muehlmann**

434 Elm Street,

Cincinnati, Ohio



## Multiple Drilling

**On Your Single Spindle  
Drilling Machine—**

Do your multiple drilling in *any pattern* on a single spindle drill with a

**U. S. Multiple Spindle  
Drill Head**

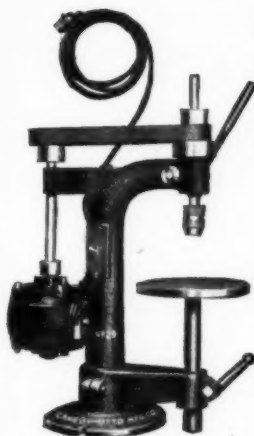
Made regularly with 2 to 6 adjustable spindles. Special heads made to your order, with adjustable or fixed spindles.

*Let us help you make  
a worth-while saving*

**The United States Drill Head Co.,** 1952 W. Sixth St.,  
CINCINNATI, O.

Michigan Agents—National Sales Engineering Corp., Detroit, Mich.





Drills to the center of a 10" circle.

Capacity,  $\frac{3}{8}$ " diameter.

Up and down run of spindle,  $2\frac{1}{2}$ ".

Up and down run of table, 7".

**\$44.00**

110 volt, 60 cycle, single phase.

Other voltages on application.

**Ready for the  
Job**

## **Another Original Canedy-Otto Feature**

That of first offering an electric bench drill completely equipped and ready for the job, the improved design eliminating the use of all gears and placing the cone pulley in exact alignment, enabling the belt to be run at its maximum speed. It also eliminates all twists and turns of the belt, meaning both a saving of belts and time, giving a greater speed of spindle, a feature of great advantage when using drill for small diameter.

Regular equipment consists of vertical type ball-bearing motor, toggle type switch, extension cord, socket, belting and chuck.

### **Canedy-Otto Manufacturing Company**

**Main Offices and Factory—Chicago Heights, Illinois**

**New York Branch**  
407 Broome St.

**Complete stock**  
*carried at branches*

**San Francisco Branch**  
955 Folsom St.



## The Drill Chuck

### You've Been Looking For

THE "TITAN" has the best features of other high-grade chucks, plus—

### A Real Quick Change

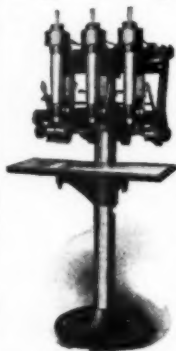
No separate key to get lost. No hammer or special device required. Simply strike end of drill and out it comes. A one-armed man can do it.

Sizes Nos. 0 to 5, for any taper shank drill, counterbore, reamer, etc. The broken tang collet gives a positive drive to drills with broken tangs. Saves time. Uses up broken drills. Saves money.

*Write for descriptive price list*

**Titan Tool Company**  
Erie, Penna.

## Sigourney Sensitive Drills



### Plain or Ball Bearing Belt or Motor Drive

Sigourney Sensitive Drills are *quality products*, extremely sensitive, accurate and durable, with all parts interchangeable.

The illustration shows a Sigourney ball bearing, high speed drill press, made with one to four spindles, to be operated up to 5000 r. p. m. The ball bearings are self-aligning, in double row.

*Write for circulars and prices*

**Sigourney Tool Co.**  
Hartford, Conn., U. S. A.

# Ettco

## New All Hardened Drill Chuck



To keep pace with the demands for Increased Production and Lower Maintenance Costs, Ettco Drill Chucks are now being made with All Hardened Steel Parts. They are stronger and better.

1. *Lighter in Weight.*
2. *All Hardened Parts.*
3. *Keyless.*
4. *Hand Operated.*
5. *Ball Bearing.*
6. *Continuous Grip.*
7. *Simple Construction.*

Seven good reasons for using the new Ettco.

Cash in on your old Drill Chucks. Send them to us and we will allow 15% on the exchange from the following list prices:

No. 1A	Ettco— 0 to $\frac{1}{4}$ in. ....	\$ 5.50
No. 2	Ettco— 0 to $\frac{3}{8}$ in. ....	6.50
No. 3A	Ettco— 0 to $\frac{1}{2}$ in. ....	9.00
No. 3 $\frac{1}{2}$ A	Ettco— $\frac{1}{8}$ to $\frac{5}{8}$ in. ....	11.00

*Ettco Chucks increase the value of electric drills*

**Eastern Tube & Tool Company**  
600 Johnson Ave., Brooklyn, N. Y.

## U. S. Sensitive 14" Floor Drill Motor Driven

A simple, rugged, convenient drill, built by machine tool manufacturers. Drills holes up to  $\frac{1}{2}$ "—quickly, accurately and economically.

Price with motor, switch and belts - **\$115**

Or with Counter-shaft for Belt Drive **\$70**

Steel spindle, ground to size, with ball thrust bearing; vertical adjustment to head; tables for long and short work; three speeds, etc. Write for folder, or better still, send in your order.

**The U. S. Machine Tool Co.**  
1952 W. 6th St., Cincinnati, Ohio



# Thor

## Electric Drills —

**A Trouble-Free  
Motor**



**W**HETHER you buy drills for steady service or occasional use, you want them trouble-proof. Thors are built to the smallest detail to eliminate repairs. ¶ They have open, rectangular slots. In most drills these slots are round—with a restricted entrance. In a Thor, there is plenty of room for coils of double, silk covered wire, hand woven and taped.

Each slot is insulated. Each coil is separated by insulation—just as in big stationary motors. ¶ And the windings, by a special Thor process of impregnation, are made moisture proof, oil proof and dust proof. ¶ Jacobs Chucks are regular equipment. All Thor Electric Drills are equipped with a ground wire, for Safety. Shocks are impossible!

**Independent Pneumatic Tool Co.**  
600 W. Jackson Blvd., Chicago, Ill.



## Costs so Little Saves so Much

YOU KNOW all about the annoyance, delay and loss caused by taps breaking at or below the surface of the work. And you ought to know what a big convenience and saving it is to have an inexpensive device like the

### *Walton Tap Extractor*

right at hand to remove the pieces instantly, without injury to the threads. 'Nuff sed. Sizes No. 8 to 1 1/4". Shipped on approval.

**The Walton Company**  
Hartford, Conn., U. S. A.

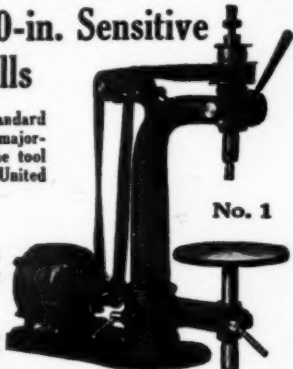
## BURKE 10-in. Sensitive Bench Drills

Are considered standard equipment by the majority of the machine tool dealers in the United States.

*There must be  
a Reason*

No. 0 Belt Driven .....	\$19
No. 1 Belt Driven .....	\$22
No. 1 Motor Driven \$42 to \$47	

We also build a 12-inch  
Bench Drill 9-16" Capacity



**The Burke Machine Tool Co.,** 297 E. 16th St.,  
Conneaut, Ohio

**TRY us  
on your**

## **Difficult Riveting Job**



We have solved the riveting problem for many manufacturers, who thought hand riveting was their only way out, until they investigated the "GRANT," which does their work better and at much less cost.

"GRANT" Noiseless Rivet Spinning Machines and Rotary Vibrating Riveters cover all classes of work, including awkward pieces and riveting in out-of-the-way places.

*Tell us what your work is  
or send samples for riveting*

**The Grant Mfg. & Machine Co.**  
C. E. Station, Bridgeport, Conn.

## **POWELL BLOW GUN**

**Designed to dispense AIR with utmost economy**

*Used for cleaning machines, machine tools and work benches*



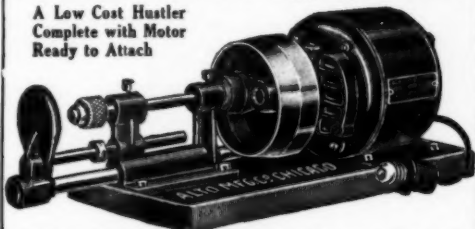
**Made with different tips for special requirements.**

*Circular on request*

**The Wm. Powell Co.**  
2525 Spring Grove Ave., Cincinnati, O.

## No. 1 ALTO High Speed Motor Driven, Tapping Machine

A Low Cost Hustler  
Complete with Motor  
Ready to Attach



*Its Main Points are—*(1) High speed, with reverse three times as fast; (2) Compact and complete, ready to attach to light socket; (3) So simple in construction that we can sell this high-grade tapper at a low price. Capacity,  $3/16$ " in brass,  $1/8$ " in steel. We also make larger motor driven Tapping Machines.

*Write for descriptive Circular and the moderate prices*

**The Alto Mfg. Co., 1647-51 Wolfram St.  
Chicago, Ill.**

***How would  
you like—***

to tap small holes as easily as you drill them; to tap them 2 or 3 times faster than usual; to wear out the small taps you are now breaking?

The Ettco High Speed Tapping Attachment usually increases output 100%. When a gun tap is used the increase is as high as 300%.

*Try one for 10 days—  
if you can then spare  
it, send it back.*

***Ettco***

**Try one  
for 10  
days**

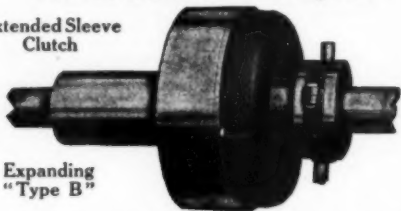


**Eastern Tube & Tool Co.  
600 Johnson Ave., Brooklyn, N.Y.**

## Edgemont Friction Clutches

For All Transmission Purposes

Extended Sleeve  
Clutch



Expanding  
"Type B"

This clutch is designed for driving wood, steel or cast iron pulleys, gears, drums, rope sheaves, sprocket wheels, etc., on the sleeve. Edgemont Friction Clutches are made for all transmission purposes. Glad to advise on your needs—right now.

**Edgemont Machine Co., Inc.,** DAYTON,  
OHIO

## TAYLOR Steel Universal Joints

for medium and slow speeds



*Simple and Durable*

## BOSTON GEARS

**BOSTON GEAR WORKS SALES CO.**

**Norfolk Downs, Mass.**

BOSTON NEW YORK PHILADELPHIA CLEVELAND CHICAGO



## A Positive Quick-Acting Lock

### For Adjustable Quickly-Opened Dies

Instead of Clamps, Levers, Screws or Nuts that must be strained or pounded to make them hold threading dies in position.



Dies adjust for variations and open quickly for removal.

That is one great difference between the "DUPLEX" DIE STOCK for pipe and others of the same type; but there are several more points of difference and value.

THE HART MFG. CO., 2319 E. 20th St., CLEVELAND, O.

## USE the CHICAGO No. 2 POWER PIPE THREADING MACHINE

For  
Production  
and Precision  
Threading  
**PORTABLE**



Capacity:  
 $\frac{1}{4}$ " to 2" Pipe  
 $\frac{1}{2}$ " to  $1\frac{1}{2}$ " Bolt

#### Featuring:

1. Quick Die Change
2. Automatic Die Head
3. Three Speeds
4. Perfected Oil Control

Send for Catalog

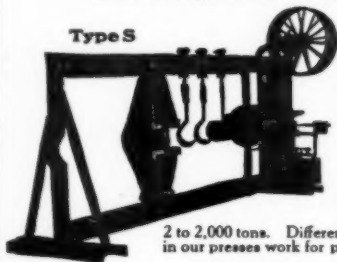
**Chicago Pipethread  
Machine Co.**

Office and Factory: 1623 Racine St., Racine, Wis.

# Used in the Biggest Plants

## Lourie Hydraulic Presses

Type S



We have, or can make for you, just what you need in Hydraulic, Power or Arbor Presses.

They are quick acting, powerful, money-saving equipment—built from

2 to 2,000 tons. Differential Pumps used in our presses work for production speed.

*Let us help you reduce those costs.*

**LOURIE HYDRAULIC CO., SPRINGFIELD, ILL.**



## Atlas Arbor Presses

### For All Forcing Operations

Illustration shows our No. 55 Power Drive Press, which is adaptable for fast production work and capable of supplying ten tons pressure.

*Write for our Bulletin—  
showing 30 different sizes*

**Atlas Press Co.**

*Department B,  
Kalamazoo, Michigan*



## The Old Way

Results in damaged shafts, bushings, pins and other parts, as well as accidents to the workmen.

### With Nicholson Arbor Presses

all of these losses and accidents are eliminated, and considerable money is saved. Made in five sizes that take work up to 20" in diameter and 31" high and exerting pressures up to 9,000 lbs. Can make immediate delivery on all sizes and will be glad to send any size on trial.

### Nicholson Expanding Mandrels

**Save Space**—A set of nine does the work of several hundred solid mandrels.

**Save Time**—Instantly fit any hole, round or square, from  $\frac{1}{2}$ " to 7".

**Save Labor**—No need to caliper a dozen or so solid mandrels, or turn one down to fit a certain j-b.

*Write for literature and 30-day trial plan*

**W. H. Nicholson & Co.**  
117 Oregon St., Wilkes-Barre, Pa.



# Give Us A Trial

On your next order for Hollow  
Bored Forgings and Steel Shafts



When it comes to furnishing such items as *Lathe Spindles, Piston Rods, Rams, Clutch Shafts*, etc., you will find us a reliable source of supply, with dependable products, prompt deliveries and the right prices. If there's anything you need now, send along your blue-prints and we'll take good care of you. Thank you.

**American Hollow Boring Co.**  
Erie, Penna.

No Smoke

No Fumes



Non-Poisonous

Non-Inflammable

Non-Explosive

**KASENIT No. 1**  
For Fine Work and  
Very Rapid  
Hardening

Sold in  $\frac{1}{2}$  lb., 1 lb.,  
3 lb., 5 lb. and  
10 lb. tins

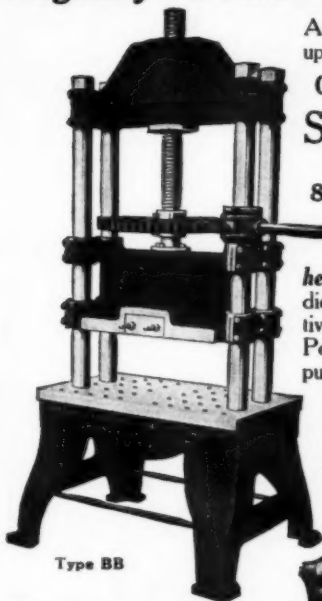
**KASENIT No. 2**  
For General  
Hardening

Sold in 25 lb. and  
50 lb. kegs

Write for Booklet on hardening. Ask your dealer or write—

**KASENIT COMPANY, 122 Liberty St.,  
NEW YORK, N. Y.**

# Rigidity—Power—Economy



Type BB

Are combined in our  
up-to-date, convenient

## One-Man Four-Post Screw Press

—delivering  
80-Tons Pressure

Your tool maker requires *no help* in handling any dies. Machine is sensitive, rigid, powerful. Perfect alignment of punch and die is assured.

Abundant room between bed and ram.

We also make three smaller sizes. Table of Type BB is 20"x36".

## A Surface Grinder

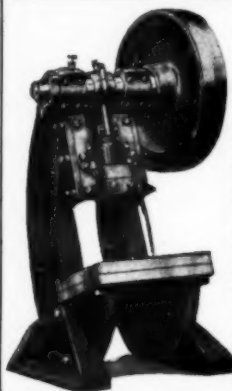
that's a revelation in quiet efficiency. Its rigidity insures accuracy. Has non-vibrating wheel. Both feeds have graduated dial.

*Let us send folders and prices*

**JARECKI MACHINE  
AND TOOL CO.**

Successor to Manhattan Machine & Tool Works  
Dept. A. GRAND RAPIDS, MICH.





Trade **Vernon** Mark

## Useful for a Wide Variety of Light Work

Vernon No. 1 Bench Power Press, O. B. I., will handle efficiently a wide variety of light blanking, forming, bending, riveting and cutting operations. All ordinary foot press work can be performed with speed and accuracy.

Equipped with Safety Clutch.

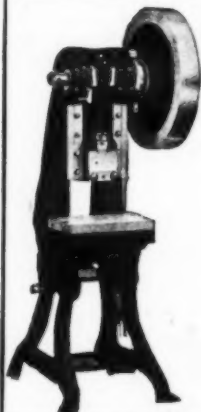
The Vernon No. 1 is equipped with our non-repeat safety clutch, which is guaranteed to prevent accidents caused by repeating.

*Further information and prices on request.*

**LaSalle Machine Wks.**

3013 S. LaSalle St., Chicago, Ill.

Manufacturers of Power Presses, Angle Shears and Dies



## Husky, Powerful

speedy Punch Presses deliberately designed for High Production work.

**All Types and Sizes**

*Write for Catalog*

**Rockford Iron Works**

Rockford, Ill.

# The Marvel Metal Band Saw No. 8

**Marvel  
Metal  
Band Saw  
No. 8**

*Always ready  
for any sawing  
job, on either  
large or small  
work.*



The blade is always in a horizontal position. Cuts off square or at any angle right or left up to 45 degrees, and without swinging the bar around the shop. Has ample power, three cutting speeds, and adjustable pressure on saw blade. The large number and variety of users prove its usefulness in every field. It has a capacity up to and including 18 inches.

*Write for Circular or the Complete Catalog of MARVEL Saws*

**Armstrong-Blum Mfg. Co.**  
341 N. Francisco Ave., CHICAGO, ILL.



**Jacobs**  
Chuck

## Sensitive Bench Drill

Each type of drilling machine has a place of its own in the drilling holes. The Sensitive Bench Drill has its place in the many classes of light work. It is the wise production man who gets the economy of the larger tools ends and that of the bench

### The Winterhoff Portable Motor Drive 10½" High Speed Sensitive Bench Drill

is a rapid and accurate production tool, designed for light work with a capacity for drilling holes up to ¾". Equipped with ½" Spindle speeds, 1100 and 2300 r. p. m. Horizontal drive gives the 1¼" endless belt furnished with machines. All parts are inter-

The use of the JACOBS CHUCK as regular equipment increases the efficiency of these machines, insuring continued service and accuracy and ease of operation.

*You'd better have the complete specifications. Write to*

**WINTERHOFF TOOL & MACHINE CO.,**

*This advertisement is in the  
interests of good Drilling  
by the makers of the Ja*

**Get the right equipment**



**Jacobs**  
*Quality*  
**Chucks**

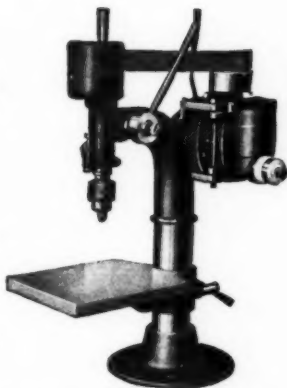
# Drills

own in the economy of  
 place in the handling of  
 man who senses where  
 the bench drill begins.

## or Driven Bench Drill

or light manufacturing,  
 ped with  $\frac{1}{4}$  h. p. motor.  
 drive gives full power to  
 arts are interchangeable.

equipment increases the  
 service and greater ac-



Write to —

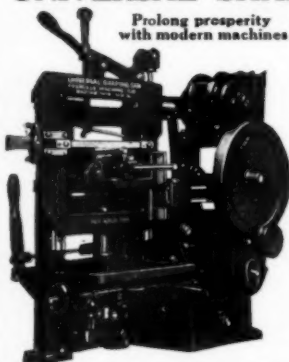
E CO., -:- ELKHART, IND., U. S. A.

nt is published in the  
*Drilling Equipment*  
 the Jacobs Chuck

ight equipment, then go ahead



## —PEERLESS— UNIVERSAL SHAPING SAW



Prolong prosperity  
with modern machines

Different Principles  
Greater Efficiency

Give The Most Of—

Speed  
Accuracy  
Blade Economy

SIZES:

6"x6"--9"x9"--13"x13"

**PEERLESS**

HIGH SPEED HACK-SAWS

6"x6" 9"x9" 13"x16"

Sturdy--Efficient--Reliable

**Peerless Machine Co.**

1609 Racine St.

Racine, Wisconsin

*Write for Details*

## The Springfield Straightening Press

"The Acme  
of  
Convenience"



Made in  
3 Sizes

**Invaluable**  
in the  
tool room,  
also for  
straightening  
crank and  
cam shafts  
and other  
automobile  
parts.

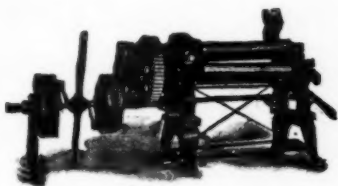
A GREAT LABOR SAVER, as you will find the arrangement of this Press makes it the *acme of convenience*.

Any work within the range of centers may be tested and straightened without unnecessary walking from press to lathe each time in straightening rough or finished work. Any length, however, may be operated upon. Of "Springfield quality" thruout.

*Write for folder illustrating many of its uses*

**The Springfield Machine Tool Co.,** Springfield  
OHIO

We also manufacture Engine Lathes and Shapers



# BELOIT

INITIAL TYPE

## Sheet & Plate Bending Rolls

---

The Beloit Initial Type Rolls are built in a large number of sizes and capacities, and for a great variety of work.

The modern design of the Beloit Rolls of this type makes it possible for the operator to curve plates completely to the edge, thus getting away from the undesirable flat near the edge of the sheet.

The quick-acting cam lever device raises the top roll for the removal of completed cylinders.

Individual and simultaneous adjustment of both ends of the forming roll can be furnished, and the machine can be arranged for third roll drive, when necessary.

Those in the market for Bending Rolls cannot afford to fail to give us their specifications, and to get our quotations.

*We solicit your inquiries for Bending Rolls, either Initial Type as shown above, or the Pyramid Type machine, as well as for Punching and Shearing Machinery, both hand and power.*

---

**Hendley & Whittemore Co.**  
100 S. State St., **BELOIT, WIS.**

Patented  
Jan. 30, 1917



## New "AUTEX" Extension Reel 1926 Model

Don't Forget the Swivel Joint Feature

Permits of carrying the lamp  
in any direction.

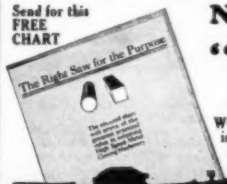
**Type 6** Rapidly finding a place in large  
Industrial Plants, Machine  
Shops and Service Stations.

Now equipped with Belden Rubber Cord  
Approved by the Underwriters

Write for descriptive circular

**The Cincinnati Specialty Mfg. Co., Inc.**  
1903 Powers St., Cincinnati, Ohio

Send for this  
**FREE  
CHART**



Rear  
view  
show-  
ing  
motor  
mount-  
ing

Capacity 4 in. Can  
be used as a port-  
able. Not necessary  
to bolt to floor. Runs  
from electric light or  
power circuit. Ask  
for bulletins on  
Racine High Speed  
Metal Cutting Ma-  
chines of every  
Capacity to 16 in.

## New Improved "RACINE" JUNIOR

**WORM GEAR DRIVE** direct from motor  
is now used. All gears enclosed and  
running in oil. New improvements in  
combination with old superiorities  
make Racine Junior abso-  
lutely free from vibration.  
The quietest, smoothest run-  
ning as well as the fastest  
and most accurate metal cut-  
ting machine of its capacity.

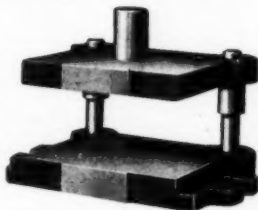
Use "Racine" H. S. Wood  
and Metal Band Saw Blades  
& "Racine" H. S. Tungsten  
Power and Hand Hack Saw  
Blades. *Catalog H.*

**Racine Tool & Machine Co.**  
1429 Junction Av., Racine, Wis.  
"STANDARD THE WORLD OVER"



## The Key to Lower Stamping Costs

*Every known refinement in design, materials and workmanship is used in Danly Die Sets. Each is a precision tool.*



*There is a Danly Die Set for every need  
— 12 types and 97 different sizes.*

Danly Die Sets, completely assembled or in the "knock-down" save 20 to 50% in first cost. They eliminate trouble, inconvenience and delay since they are ordered from the Danly Catalogue by type and number. Danly Die Sets lower stamping costs enormously because they eliminate shearing of dies, increase the "pieces per grind" 500 to several thousand per cent; reduce set-up time 75% or more; reduce the depth per grind about 50 to 80%, and produce more accurate stampings.

*Immediate shipment from stock.  
Write, wire or 'phone nearest office.*

### Danly Machine Specialties, Inc.

4913 Lincoln Ave., Chicago, Ill.

Detroit, Mich.  
1537 Temple Ave.

Long Island City, N. Y.  
35 Wilbur Ave.

## ANGLE IRON SHEAR No. 4

Capacity 2"x2"x¼ Angle Iron  
Weight, 41 Lbs.



Inserted Tool Steel Blades.

It is so designed that it will shear without any clamping and does nice square work.

Leverage over entire surface of Shearing.

*Write for Prices*

**WHITNEY**  
Metal Tool Co.  
95 Forbes St.,  
Rockford, Ill.

## "Bridgebilt" Factory Seating and Tool Racks

A diversified line to meet requirements of every branch of industry.

**The Bridgebilt line  
will give long and  
satisfactory service**

*For illustrated price list  
and discounts write—*

**The Chicago Wire  
Chair Co.**

619 No. LaSalle St., Chicago, Ill.



No. 1010-SWS

# Spring Press

(UNIFORM BLOW)

## Foot or Power

Single and Double Action

These new dependable Presses are used in large numbers by manufacturers of—

Electric Devices, Toys,

Jewelry, Clocks, Cutlery,

Hardware, Radio Sets,

Instruments, Etc.

The Uniform Blow is a very special feature—it increases production and eliminates costly inspection. Investigate.

**The Taylor & Fenn Co.**

Hartford, Connecticut, U. S. A.

# For Sure Balance--

an absolutely level and solid "Way" is necessary

## Bowsher "Balancing Ways"



are brought to an absolute level in ten seconds. No revolving parts.

The edges or "knives" upon which the work is tested are ground true, and are mounted upon the planed "ways" of a heavy bed or frame.

Standards adjustable to suit length of arbor.

Three sizes for floor—one for bench use

Send for Catalog "F"

The N. P. Bowsher Co., South Bend, Ind.

## The Anderson Improved Ever-Ready Balancing Ways



For quickly balancing 'most anything that revolves, up to 24,000 lbs.; for testing straightness of shafts, crankshafts, etc. Always ready; no centers or leveling required. Glass-hard spindles do not lose accuracy; chilled iron discs; sensitive bearings.

"Swing"	20"	40"	60"	72"	96"	72"
Greatest distance bet. standards	20"	30"	30"	66"	88"	20"
Capacity in lbs.	1000	2000	2000	5000	10000	24000
Approx. shipping weight	45	90	150	350	650	
Code	Ben	Bid	Bis	Bib	Ben	

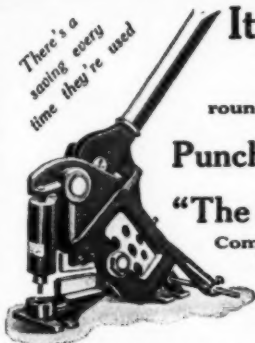
Any of above can be furnished with longer shafts

**Anderson Bros. Mfg. Co.**

1915 Kishwaukee St., Rockford, Ill.



*There's a  
saving every  
time they're used*



## It Costs Less To Cut

rounds, squares, flats  
and to

### Punch Those Holes

on

### "The Bench" No. 3

Combination Shear,  
Rod Cutter & Punch

CAPACITY  $\frac{5}{8}$ "

**\$45<sup>00</sup>** f. o. b.  
Phila.

**THE BENCH MACHINE TOOL CO.**

Makers of "THE BENCH" Tapping Machines  
222 N. 13th Street, Philadelphia, Pa.

## *The* **BARKER** GENERAL PURPOSE **WISE**

For Planers, Shapers, Drilling and Milling Machines



*Steel faced jaws*

*Graduated to swivel  
any angle*

*Extra heavy for  
hard usage*

The screw runs through entire length of vise, with bearing on each end. Nut at rear equalizes strain. Sizes 8" and 12" General Purpose and 16" Mold Makers' Vise. Sturdily built, and so exceptionally handy that users would not part with them. Be sure to get our literature and prices before buying.

**WM. BARKER & CO.**

Manufacturer of Machine Tools,

COVINGTON, KY.

## T.H.L. Front Lever Bench Punch

Malleable iron body; working parts hardened. Steel shaft and plunger. Die cannot lose alignment with punch. All parts interchangeable. Built for hardest, toughest work.

**PRICE \$45**

Extra Punches, 20 cents each; extra dies, 30 cents.

Capacity  $13/32"$  thru  $1/4"$  steel,  $11/32"$  thru  $5/16"$ . Punches up to  $1/2"$ . Weight, 70 lbs.

*A good buy; can ship promptly*

**T. H. LEWTHWAITE  
MACHINE CO.**

(Est. 1890)

417 E. 31st St., NEW YORK



## Vanderbeek Universal Joints



—represent the practical refinements of 25 years experience in manufacturing Universal Joints. All parts are generous sized, fully protected against dirt, and are practically self-oiling. Exceptionally strong, they transmit full power up to  $70^\circ$ .

Vanderbeek Joints are in daily use on thousands of machines.

*Write today for our  
Descriptive Catalog.*

**American Tool Works, Inc.**  
Hartford, Conn., U. S. A.





**Let  
the  
Blue Book  
be  
your  
Messenger**

***There are three essentials  
to good advertising —***

1. The article advertised must have real merit.
2. The copy describing it should be clear and concise.
3. The advertising message should be delivered to the maximum number of possible buyers.

Hitchcock's Machine Tool Blue Book will deliver your message to more responsible users and buyers of machine tools, including automotive and other large manufacturing plants, railway mechanical officials, etc., than any other publication on earth. If your machine is right and your copy is right, then the use of the Blue Book as your advertising medium completes a combination that is unbeatable.

*The rates are most reasonable  
for the service; write for them.*

**HITCHCOCK PUBLISHING CO.**  
508 SOUTH DEARBORN STREET, CHICAGO, ILL.

# The Ball Expansion Hand Reamer



The Ball Reamer is different from the usual type of expansion reamer in that the body of the reamer is solid, with a pilot for guiding the reamer through the hole.

The body of the reamer is hardened. The blades are set in the body of the reamer and are locked at each end by set screws.

The blades are made of either carbon or high speed steel. The expansion of the blades in no way affects the truth of the body of the reamer as is the case in every type of expansion reamer where the body is split. Range of expansion .030" to .045".

*Catalogue on Request*

## The Schellenbach-Hunt Tool Co.

118 Opera Place, Cincinnati, Ohio

*Agents:* Gropler Bros., 105 Hudson St., New York, N. Y.  
E. E. Fletcher, 6007 Euclid Ave., Cleveland, Ohio

## Second-Hand Machinery

Lists of Second-Hand Machinery, either For Sale, Wanted or For Exchange, set in uniform style, will be published under this heading at the rate of **80 cents a line**, across the page, each issue, plus **\$2.50** for name and address. Minimum charge, **\$5.00**. No display permitted in this department.

**Write directly to those offering the machines for sale** for prices and full descriptions. If what you seek is not listed, use the blank enclosed to make known your wants to the publisher, who will pass them along to all Machine Tool Blue Book advertisers.

**Circulation of Machine Tool Blue Book, 25,000.**

### FOR SALE BY

<b>Beaudry Company, Inc.,</b>	<b>Oliver Building, Boston, Mass.</b>
Boring bar, 3 $\frac{1}{2}$ " Pedrick.	Motors, 15 h. p., 550 volt, a. c., (2).
Boring lathe, 24" Reed special.	Motor, 25 h. p., 550 volt, a. c.
Boring mill, 72" Niles vertical.	Planer, 30" Gray, 2 heads.
Grinder, tap & die cutter, Greenfield.	Planer, 60" Gray, 4 heads.
Grinder, portable electric, floor.	

### FOR SALE BY

<b>Surplus Material &amp; Machinery Co.,</b>	<b>8735 Kercheval, Detroit, Mich.</b>
Lathe, 18"x8' Cisco, q. c.	Mill, No. 1 LeBlond universal.
Lathe, 18"x8' Cincinnati, q. c.	Mill, No. 2 Kempsmith universal.
Lathe, 24"x12' Schumacher standard.	Mill and drill, No. 1 Knight.
Mill, No. 2 Kempsmith plain.	Turret, 24" Davis, h. d.

### FOR SALE BY

**Botwink Brothers, Inc.,** - **67 Water St., New Haven, Conn.**  
**MILLING MACHINES.**  
 10—Brown & Sharpe No. 1 plain cone drive milling machines, with counter-shafts. Price \$275 each net, f.o.b. New Haven, Conn. Many other bargains.  
 Wire, write or phone.

### FOR SALE BY

<b>Bennett Machinery Co.,</b>	<b>30 Church St., New York City</b>
Brake, 8' Chicago, 10 gauge.	Lathe, 18"x8' Bell.
Cold saw, 6" Gleim.	Miller, univ., No. 3 Hendey, cone.
Drills, 20" & 24" Rockford.	Planer, 54"x12' Pond, 4 head, belt.
Keyseater, No. 4 Mitts & Merrill.	Plate planer, 18' Niles.
Lathe, 16"x8' Hudson.	Radial, 4' Dreses, cone drive.

### FOR SALE BY

<b>Clark Machinery Co.,</b>	<b>1235-45 St. Clair Ave.,</b>	<b>Cleveland, O.</b>
Bolt threader, 2-spindle Acme, 1 $\frac{1}{2}$ ".	Planer, 42"x42"x10' Gray, 2 heads.	
Boring mill, No. 2 Rockford.	Planer, 26"x26"x 7' Gray, 1 head.	
Chucking grinders, No. 6 Bryant.	Planer, 28"x28"x 8' Gray, 1 head.	
Lathes, 14" to 24".	Press, No. 69 Bliss, d. act., inc., grd.	
Millers, vertical, Becker Nos. 2 & 3.	Turrets, Warner & S. Nos. 4 & 6.	

Machine tools for every purpose. Send us your inquiries.

## SECOND-HAND MACHINERY

### FOR SALE BY

**Cyril J. Bath & Co., E. 70th & Mch. Ave., N. E., Cleveland, O.**

#### BORING MILLS—VERTICAL.

42" Baush, 2 swivel heads, 75%. | 60" Niles, 2 swivel heads and one  
7' Betts, double head, 85%. | internal boring head.  
100" Niles, 2 heads.

#### BORING MILLS—HORIZONTAL.

No. 36 Landis, floor type, 3½" bar, 80%. | 5" bar Beaman & Smith.

#### DRAW BENCHES.

15,000 lbs. to 25,000 lbs. Waterbury-Farrel, United Engineering and Stand-  
ard; 20" draw, with 18' extensions for mandrels, heavy cast iron; 85%.

#### DRILLS—MULTI-SPINDLE.

4-spindle 20" Barnes, 85%. | 4-spindle Barr sensitive, 85%.

#### DRILLS—RADIAL.

4', 5' & 6' Bickford. | No. 1, 8" wall radial.

#### DRILLS—UPRIGHT.

24" Cincinnati, slid. hd., fric. bk. grs. | 32" Cincinnati, with tap. att., 75%.  
28" Cincinnati, sliding head, 80%. | 24" No. 25 Foote-Burt, 90%.

#### FORGING MACHINES AND BULLDOZERS.

4, 5, & 25 Bulldozers. | 250-ton Mesta steam hydraulic, 85%.  
1½", 1½" & 4" Forging machines.

#### GRINDERS.

10x36" Modern univ., and parts, 70%. | Mammoth shear blade grinder, capa-  
54" Diamond surface, 85%. | city 100" long.  
18x96" Norton plain, 75%.

#### HAMMERS.

100-lb. Bradley, helve, 75%—90% (3). | 800 lb. to 4000 lb. board and steam  
350 lb. to 8000 lb. steam forging. | drops.

#### LATHES.

16" to 20" tool room, various lengths. | 32"x18" Schumacher, cone head, 60%.  
25"x12" LeBlond heavy duty. | 32"x32" Bridgeford, comp. rest, m. d.  
27"x22" Bridgeford, pl. turning, m. d. | 36"x44" Bridgeford, c. r., m. d.  
30"x16" Lodge & Shipley selective | 48"x26" Bridgeford, grd. hd., t. a., 85%.  
geared head, arranged m. d. | 54"x34" Houston, Stanwood & Gam-  
30"x22" Bridgeford, pl. turning, m. d. | ble, geared head, motor drive.

#### MILLING MACHINES.

Style "B" Gooley & Edlund, 80%, (2). | Becker miller, model "C," table  
No. 2 Cincinnati plain, 80%. | 14"x54", motor drive, 85%.  
No. 3 Brown & Sharpe, plain, 65%. | No. 4 Cincinnati high power miller.  
No. 3B Brown & S., pl., heavy, 60%.

#### PLANERS AND SHAPERS.

30"x30"x8' Gray, single head, 60%. | 60"x48"x16' Pond, 3 hds., old style,  
48"x48"x16' Pond, 4 heads, heavy | light pattern, 50%.  
duty. | 20" American crank shaper.  
72"x72"x16' Betts, four heads, 90%.

#### PIPE MACHINES.

No. 9½ Merrill, capacity 2½" to 8". |  
2", 4" & 6" Jarecki, with dies and countershaft, late models, 85%.

#### PRESSES.

No. 57 Toledo trimmer, with side shear, 80%.  
No. 56 Consolidated, 4" stroke, 80%.

#### BENDING ROLLS.

10'—4" capacity Niles-Bement-Pond.  
14'—1½" capacity Southwark.

#### PUNCHES AND SHEARS.

6x6 Hillis & Jones angle shear.  
No. 26 Whitmore slitting shear.  
No. 2 Hillis & Jones horizontal punch, 70%.  
54" gap American ship punch, capacity 1" thru 1", 70%.  
84" throat, Long & Allstatter capacity about 1" thru 1".  
Kling Bros. horn press, 60" horn, flywheel 50" dia., 6½" face.  
48" throat No. 4 Southwark, capacity 2"x1½".  
60" throat No. 5 Southwark, capacity 1½"x1½".  
No. 6 Quickwork rotary shear, capacity up to 1½" plate.  
36" throat Lennox rotary shear, capacity about 1" plate.  
No. 2 Garrison alligator shear.

## SECOND-HAND MACHINERY

### Cyril J. Bath & Co.—Continued

#### SAWS.

48" Newton cold saw, motor drive. | Power hack saws, 6" to 9".

#### SLOTTERS.

48" Niles-Bement-Pond, motor dr. | 12" Sellers, 75%.

#### TUMBLING BARRELS.

Several sets 18"x48" chill lined square, with roller bearings and exhaust.

#### TURRET LATHES AND SCREW MACHINES.

21" Gisholt, standard model, 70%. | No. 3A Warner & Swasey.

3"x36" Jones & Lamson.

#### MISCELLANEOUS.

Acetylene generator, Davis.

Blower, No. 4 Root, motor drive.

Blower, American, 9' fan, motor driven, 85%.

Blowers, Sturtevant, motor driven, 85%, (2).

Boring machine, for cylinders, portable, 4" bar, 7" feed, arranged for motor or engine drive, 75%.

Gear cutter, 36" Gould & Eberhardt, 60%.

Pyrometer, Brown.

### FOR SALE BY

#### The O'Brien Machinery Co.,

Boring machine, 36" Bullard, turret head, vertical.

Die sinker, No. 2 Pratt & Whitney.

Die sinker, No. 3 Pratt & Whitney.

Die sinker, No. 4 Pratt & Whitney.

Drill, 32" Aurora, motor driven, tapping attachment.

Drill, 28" Cincinnati Bickford, geared box drive.

Drills, 28" Cincinnati, tap. att. (2).

Drill press, D-1 Colburn heavy duty.

Grinders, foundry, Norton heavy duty, (2).

Hammer, 4000 lbs. Chambersburg

steam drop.

Hammer, 2500 lbs. Chambersburg

steam drop.

Hammer, 1500 lbs. Chambersburg

steam drop.

Hammer, 1000 lbs. Chambersburg

steam drop.

Hammer, 600 lbs. Cham'burg st. d.

Hammer, 1500 lbs. Erie sgl. frame st.

Hammer, 1600 lbs. Niles-Bement-

Pond, double frame.

Hammer, 1000 lbs. Billings & Spencer

board drop.

Hammer, Bement-Miles, 300 lbs.

Lathe, 22"x11' Lehmann, geared

head, taper attachment.

Lathe, 24" x 10' Lodge & Shipley,

taper attachment.

Lathe, 24"x10' American, taper att.

Lathe, 28"x25' Pond.

Lathe, 28"x30' Harrington.

Lathe, 36"x18' American, cone head,

taper attachment.

Lathe, 20/40"x10' Rahn-Larmon ex-

tension bed gap.

Lathe, 26"x44" with 24' bed McCabe

double spindle.

#### 113 N. Third St., Philadelphia, Pa.

Milling machine, Newton combination circular milling machine and saw for structural work.

Milling mche., No. 4B Becker vert.

Pipe machines, 2", 4", 6", 8" & 12"

Oster, Cox, Williams, Eaton-Cole

& Burnham and Jarecki makes,

belt or motor driven, comp. stock.

Planer, 36"x36"x12" Woodward &

Powell, motor driven, 3 heads.

Planer, 36"x36"x24" Bement, 4 hds.

Planer, 48"x48"x16" Flather, 4 hds.

Press, No. 74½ trimming press.

Press, No. 84 Toledo gr. str. side.

Press, No. 73½ Bliss trimming press,

with side shear.

Presses, Nos. 18, 19 and 20 Bliss.

Press, Chambersburg motor driven

trimming.

Punch and shear, No. 3 Hilles & J.,

dbl. end, motor dr.; punch end,

42" thrt. cap. 1½" thru 1"; shearing

end, 36" thrt. cap. 1" plate, 2½"

round, 7"x1½" flat, 5"x5"x½" angle.

Punch and shear, Pels combination;

punching cap. 1" thick; shearing,

2" rd., 2½" squares, 6x6x½" angles.

Radial drill, 5' Pond, motor driven.

Radial drill, 5' Bickford universal.

Radial drill, 3' American.

Saw, Newton No. 2 cold saw.

Saw, Kapen Lucas No. 10 cold saw.

Shaper, 24" American.

Shaper, 24" Steptoe, back geared.

Shapers, 12", 14", 16", 21" and 24"

stroke, assorted makes.

Shaper, 3 Bement-Miles massive

heavy duty, traveling head.

Turret lathe, flat, 3"x36" Jones & L.

Turret lathe, No. 6½ Bardons &

Oliver, 2½" w. f. cap., cabinet base.

## SECOND-HAND MACHINERY

### FOR SALE BY

**J. E. Haetten & Co., Inc., - 50 Church St., New York, N. Y.**

Automatic, No. 55 National Acme 1½", lot of tools.....	\$ 650.
Automatics, 1, 2" Cleveland model B, (40), each.....	100.
Boring mill, 72" Cincinnati vertical, heavy duty.....	5000.
Drill, 3" American sensitive radial.....	300.
Drill, 24" Bickford s. h. drill, tapping.....	450.
Drill, 22" Barnes, all-g geared tapping and quick return.....	700.
Drill, No. 25 Foote-Burt, heavy, compound table.....	500.
Drill, 4" Niles semi-universal radial, scarcely used.....	1500.
Engraver, E-3 Keller die sinker, motor, like new.....	900.
Gear cutter, No. 4 Brown & Sharpe, 48x10, A1.....	700.
Generator, 300 k. w., Westinghouse Parsons turbo, jet condenser.....	1750.
Grinders, No. 65 Heald auto. cylinder, like new (3) each.....	950.
Grinder, 16x48 Landis crankshaft, adj. centers.....	850.
Grinder, 15x15x10" Norton table type, surface, never used.....	3750.
Hammer, 200 lb. Gould & Eberhardt, drop.....	250.
Lathe, 14"x5" LeBlond, automobile type.....	450.
Lathe, 21"x8" LeBlond, g. h., 220 d. c. motor, taper.....	750.
Lathe, 33"x33" Pond, l. c. g., t. g., 2 carriages.....	1750.
Miller, 30"x20"x16" Ingersoll, 4 heads, A-1.....	2000.
Miller, 48"x30"x20" Ingersoll, 2 vertical heads.....	2000.
Thread miller, No. 12 Lees-Bradner, like new.....	1650.
Turret lathe, 24" Gisholt, 3½" bore chuck.....	350.
Turret lathe, 2x24 Jones & Lamson, serials 21000.....	1000.
Turrets, No. 6-A Potter & Johnston, serials 15,700, (2), each.....	500.
Turret, 24" Greenlee, 3½" hole, belt drive, 95%.....	900.

### FOR SALE BY

**Peninsular Machinery Co., 429-31 E. Jefferson Ave., Detroit, Mich.**

#### LATHES.

13"x 5' Blount speed lathe.	17"x8' LeBlond rapid product'n, m. d.
13"x 5' South Bend, (2).	21"x11' LeBlond, all geared, (2).
13"x 6' Willard, (3).	21"x12' LeBlond line bearing.
13"x 6' Sebastian, (4).	26"x10' LeBlond crankshaft.
14"x 6' Carroll-Jamieson.	Adams short-cut lathe, with taper.
14"x 6' Reed, l. c. g., (2).	3½"x36 Lo-Swing.
16"x 8' Bradford, l. c. g.	

#### DRILLING MACHINES.

3-spdl. Henry & Wright, h. s., b. b.	25" Barnes 4-spindle gang.
22½" Sibley all-g geared, p. f.	No. 3 Baush multiple.
28" Barnes, s. h., taper.	

#### MILLING MACHINES.

Briggs type A.	No. 0 Rockford plain.
No. 32 Kempsmith.	No. 0 Garrigus hand millers, (2).
No. 33 Kempsmith plain.	No. 3H LeBlond plain, cone type.
No. 2 Brown & Sharpe plain.	

#### TURRET SCREW MACHINES.

14" Defiance, f. h.	No. 3 Foster f. h. turret lathes, (2).
2½x36 Pratt & Whitney, a. c.	

#### GRINDERS AND POLISHERS.

No. 10 Brown & Sharpe plain.	No. 26 Besly, double spindle, m. d.
No. 190 Greenfield universal.	No. 5 Oliver m. d. drill grinder.
No. 50 Heald cylinder.	No. 4 Webster & Perks polishing.
20" Brown wet grinders.	No. 23-B Valley City disc.
No. 15 Bryant, motor drive.	

#### MISCELLANEOUS.

Band saw, 6" Napier.	Metal cutter, No. 1 Gray.
Centers, bench, Brown & Sharpe, (3).	Screw slotter, No. 1 National Acme.
Cutting-off mchs., 4" Hurlbut-R., (2).	Shaper, 7" Rhodes horizontal.
Gear generator, 18" Gleason, bevel.	Tooth round's, 12" Rochester aut. (2).
Gear hobber, No. 4 Farwell auto.	Tumbling barrels, No. 3-S Globe, (2).
Hammer, drop, No. 5 Williams-W.	Welder, No. 40A Thompson, butt.
Lapping mchs., Bethel-Player, (2).	



## SECOND-HAND MACHINERY

### FOR SALE BY

Reliance Machinery Sales Company

1405 Brighton Road,

N. S. Pittsburgh, Pa.

Blower, No. 5 Champion, 64" outlet.  
Blower, Amer. pressure, 461 cu. ft.  
Boring mill, No. 44 D. & H., floor type, 34" bar.  
Boring mill, No. 108 D. & H., floor type, 4" bar.  
Boring mill, Binsse horiz., 4" bar.  
Boring mill, Niles horiz., 44" bar.  
Boring mill, 34" Colburn, 1 head.  
Boring mill, 36" Bullard, vert., 2 hds.  
Boring mill, 42" Bullard, vert., 2 hds.  
Boring mill, 54" Bullard Maxi., m.d.  
Boring mill, 60" Bullard vert., 2 hds.  
Brake, 60" D. & K., 14 gauge, m. d.  
Broach, Nos. 3&4 LaPointe (Hudson)  
Buffer, 2 h.p. U. S. Elec., 220-3-60.  
Centering mchc., 4" Whiton, S. H. 2-sp.  
Chamfering machine, Warner & S.  
Drill, 12" Leland-G. 6-spdl., m. d.  
Drill, 13" Fossdick 6-spdl. m. d.  
Drill, 16" Fossdick, 6-spdl., m. d.  
Drill, Reed, 4-spindle, cap. 4".  
Drill, Haush, 6-spindle, No. 3 taper.  
Drill, No. 13 Natco, 16-sp., No. 1 tap'r.  
Drill, 20" Barnes, camel back.  
Drill, 21" Cincinnati, sliding head.  
Drill, 24" Hoefer, sliding head.  
Drill, 35" Snyder, sliding head.  
Drill, No. 310 Baker heavy duty.  
Drill, Model F Turner auto. turret.  
Drills, 20" & 24" Foote-Burt, h. d.  
Gear cutter, 36" x 10" G. & E., s. p. d.  
Generator set, 230 k. w. G. E., 230 v., d. c. connected 400 h. p. Erie Ball.  
Generator set, 50 k. w., 230 v., d. c. generator, connected 90 h. p. Bruce-McBeth gas engine.  
Grinder, Oliver drill, m. d., cap. 4".  
Grinder, No. 70 Heald internal.  
Grinder, No. 5 Bridgeport wet tool.  
Grinder, No. 3 Brown & S. univ.  
Grinder, 6" x 32" Norton plain.  
Grinder, 12" x 30" Modern plain.  
Grinder, Besly No. 8-20-L, dbl. disc.  
Grinder, WPL New Yankee, cap. 24".  
Hammer, 80 lb. Bradley cush. helve.  
Hammer, No. 4 Beaudry, mtr. dr.  
Lathe, 12" x 6" Seneca Falls.  
Lathe, 12" x 10" Davis tool r'm, q. c. g.  
Lathe, 12" x 10" Hendey, tie bar.  
Lathe, 14" x 6" Hendey, g. h., m. d.  
Lathe, 14" x 6" Seneca Falls, q. c. g.  
Lathe, 14" x 8" Whitcomb-Blaisdell.  
Lathe, 16" x 8" Bradford, q. c. g.  
Lathe, 17" x 8" Sidney, hvy. duty, q. c. g.  
Lathe, 18" x 8" L. & S., q. c. g., m. d.  
Lathe, 18" x 8" Greaves-K., q. c. g.  
Lathe, 18x10 Whitcomb-B. g. h., s. p. d.  
Lathe, 24" x 8" Hendey, tie bar.  
Lathe, 24" x 10" Boye & E., g. h., m. d.  
Lathe, 24x10 Whitcomb-B. g. h., m. d.  
Lathe, 24x12 Boye & E., d. b. g., q. c. g.

Lathe, 24" x 18" American, g. h., m. d.  
Lathe, 24" x 20" Lodge & S., m. d.  
Lathe, 26" x 12" Bridgetford hvy. duty.  
Lathe, 27" x 26" Schumacher-B., q. c. g.  
Lathe, 29" x 12" B. & E., d. b. g., q. c. g.  
Lathe, 30" x 12" Johnson, triple grd.  
Lathe, 30" x 16" New Haven, p. c. g.  
Lathe, 34" x 12" LeBlond, triple grd.  
Lathe, 36" x 28" Lodge & S., m. d.  
Lathe, 38" x 22" Pittsburgh, t. g.  
Lathe, 38" x 50" New Haven, dbl. hd.  
Lathe, 42" x 31" Pond, triple geared.  
Miller, No. 1 U. S., hd., complete.  
Miller, No. 2 Cincinnati, v. a.  
Miller, No. 3 Hendey plain.  
Miller, model "C" Becker, vert.  
Millers, Sellers, Lincoln type, (2).  
Miller, model "H" Becker, mfg. type.  
Pinion rougher, 36-BM Gould & E.  
Pipe machine, B. & K., 1" to 2" m. d.  
Pipe machine, Merrill, 1 1/2" to 6".  
Pipe machine, 8" Cox, cap. 2 1/2" to 8".  
Pipe mchc., 10" E. C. & B., 2 1/2" to 10".  
Pipe machine, Merrill, 2 1/2" to 12".  
Pipe machine, Cox, cap. 4" to 12".  
Pipe machine, Cox, cap. 8" to 16".  
Planer, 24" x 24" x 6" Gray, 1 hd.  
Planer, 36" x 36" x 8" Cincinnati, 1 hd.  
Planer, 36" x 36" x 8" Cincinnati, 3 hds.  
Planer, 36" x 36" x 10" Cincinnati, 3 hds.  
Planer, 36" x 36" x 12" Cincinnati, 4 hds.  
Planer, 42" x 42" x 12" Cincinnati, 4 hds.  
Planer, 48" x 48" x 12" Cleveland openside.  
Planer, 60" x 48" x 20" Cincinnati, 3 hds.  
Planer, 60" x 60" x 16" Betts, 3 heads.  
Planer, 72" x 72" x 18" D. & H. o. s. m. d.  
Press, No. 3-A Willard, o. b. i., 1 1/2" str.  
Press, No. 19 Bliss, o. b. i., 2" str.  
Press, No. 23 Stoll, homing.  
Press, No. 87 Niagara, screw.  
Presses, Nos. 61 & 62 Bliss, o. b., f. w.  
Press, Ferracute DD2, o. b. i., cam.  
Press, No. 10 Bliss, reducing, 4" str.  
Press, No. 65 Consolidated, 5" str.  
Press, No. 75 Bliss straight sided.  
Press, No. 87 Bliss straight sided.  
Press, No. 78 Bliss straight sided.  
Punch, Royersford d. e., cap. 1" x 4", arch. jaw, 18" throat.  
Punch, EF Cleveland, 48" thrt., m. d.  
Punch, Wickes, 48" thrt., cap. 1 1/2" x 1".  
Radial drills, 3" Bickford plain, t. a.  
Radial drill, 4" Mueller pl., t. a., s. p. d.  
Radial drills, 4" & 5" Prentice plain.  
Radial drill, 5" American pl., t. a., m. d.  
Radial drill, 6" American pl., belt dr.  
Reduction gear, Foote, 50 to 1.  
Saw, Williamson metal band.  
Saws, American metal sw., m. d., (2).  
Saw, No. 2 Ryerson friction, m. d.  
Saw, No. 3 Ryerson friction, m. d.  
Shaper, 24" Cincinnati b. g. crank.

Our warehouse is full of bargains. What have you for sale?

## SECOND-HAND MACHINERY

### FOR SALE BY

**Edgewater Steel Company,** - - - **Pittsburgh Pa.**  
Pumps, 8x10 Gould triplex, motor driven, direct connected, 100 lbs. pressure, 200 gal. per min., condition good, (2), price \$550. each; 440-volt, 60 cycle motor \$225. each extra,  
Radial drill, Prentiss, 6' arm, belt driven, condition good, \$400.

### FOR SALE BY

**Cincinnati Machinery & Supply Co., 215 E. Pearl St., Cincinnati, O.**

#### LATHES.

14"x6' Hendey tool room, q. c. 24"x12' American, l. c. g., \$475.  
16"x8' Hendey tool room, q. c. 30"x12' LeBlond heavy duty, q. c.  
20"x8' Hendey tool room, q. c. 36"x14' Fay Scott, l. c. g.  
20"x12' Hendey tool room, q. c.

#### MILLING MACHINES.

No. 1 U. S. hand millers, \$125. No. 2 Brown & Sharpe, sgl. p. d.  
No. 6 Whitney hand millers. No. 4 Brown & Sharpe, sgl. p. d.  
No. 2 Cincinnati, \$285.

#### GRINDERS.

No. 60 Heald cylinder. 7"x30 Greenfield, for general and  
No. 70 Heald grinder. piston work, \$200.  
10"x30 Landis.

#### PLANERS AND SHAPERS.

72"x60"x30' Hamilton, 5 heads. 20" Columbia crank shaper.  
30"x32"x12' Gray, 1 head, \$800. 18" Barker crank shaper.  
24"x24' Gray, 1 head. 12" Hendey friction, \$125.  
18"x18"x48" Hendey, 1 head.

#### RADIALS.

3' Prentice, single p. d. 6' Bickford, single p. d.  
4' Bickford universal. 5' American, cone drive.

#### MISCELLANEOUS.

Chain hoists, half-ton Tribloc, \$22; one ton, \$27.  
Write for complete machinery and small tool lists.

### FOR SALE BY

**Syracuse Supply Company. 314 W. Fayette St., Syracuse, N. Y.**

Guaranteed New Machines in original crates at prices below list:  
Crucible, FD-104 Hoskins. Grinders, Diamond wet tool.  
Drills, 21" Canedy-Otto (2). Lathe, 10"x5' Monarch.  
Drills, 20" Buffalo (4). Lathe, 14"x6' Monarch.  
Drills, 35" Aurora sliding head (4). Lathe, 14"x8' Monarch.  
Drills, No. 11 Pratt & Whitney Lathe, 16"x6' Monarch.  
multiple, 16 spindles. Pipe machine, No. 70 Forbes.  
Drills, No. 11 Pratt & Whitney Screw mchs., No. 4 W. & S., g.f.h., (3).  
multiple, 8 spindles. Straightener, No. 24 Corey.  
Grinders, No. 60 Heald (2).

#### Exceptional values in Used Tools:

Cylinder borers, 6-spindle Moline adjustable No. 5, 36".  
Drill press, 25"W. F. & John Barnes. Millers, No. 4 LeBlond plain (2).  
Drill press, 4-spindle Barr sensitive. Planer, 30"x30"x16' L. W. Pond.  
Drill press, 2-spindle Barr sensitive. Planer, 60"x60"x22' Niles.  
Lathe, 14"x 6' American. Radial, 5' Pond.  
Lathe, 14"x 6' Monarch. Thread miller, 10" Lees-Bradner.  
Lathe, 16"x 6' Hendey, rebuilt. Tilted turret, No. 6 Wood.  
Lathe, 16"x 5' American, geared Turret lathes, No. 4 Foster (2).  
head, rebuilt. Turret lathe, No. 2 Warner & S., hollow hex.  
Lathe, 16"x 8' Monarch. Turret lathe, 24x26 Pratt & Whitney.  
Lathe, 16"x10' American. Turret lathe, No. 24 s. g. Garvin.  
Miller, No. 5 Becker vertical. Turret lathes, 3x36 Jones & L. (3).  
Miller, No. 2 Brown & S., rebuilt. Turret lathe, 2x24 Jones & Lamson.  
Millers, No. 3H LeBlond plain (2). Turret lathe, 21" Gisholt.  
Turret lathe, No. 3 Cincinnati-Acme.

## SECOND-HAND MACHINERY

### FOR SALE BY

**Chas. Mollitor Machinery Co., 118-124 S. Clinton St., Chicago, Ill.**  
LATHES.

- |  |   |
|--|---|
| 14"x 6' and 16"x8' Hendey, with taper and draw attachment. (4).        | 16"x 8' Pratt & Whitney, q. c. g., taper, relieving attachment. |
| 24"-40"x12' Greaves-Klusman, gap.                                      | 16"x 6' Pratt & W., q. c. g., taper.                            |
| 24"x10' Lodge & Shipley, grd. hd.                                      | 15"x 8' South Bend.   |
| 24"x10' Carroll-Jamieson.  | 14"x 6' LeBlond, q. c. g., taper.                               |
| 18"x10', 16"x8' Sidney, q. c. g., taper.                               | 13" Champion engine lathe.                                      |
| 18"x 8' Morris, q. c. g., dbl. g., (2).                                | 12"x 5' Pratt-W., taper, draw collets.                          |
| 18"x 8' Walcott, q. c. g., d. b. g.                                    | Stark and Pratt-Whitney precision.                              |
| 18"x 8' Sidney, q. c. g., d. b. g., (2).                               | 12" Lancaster engine lathe.                                     |
| 16"x 8' Bradford, q. c. g., d. b. g.                                   |   |
| 16"x10' & 16"x6' Pratt & Whitney, taper, draw, collets, relieving att. |   |

### MILLERS.

- |                                      |                                       |
|--------------------------------------|---------------------------------------|
| 24" Bullard vert. rapid production.  | 24" Colburn vertical.                 |
| No. 2 Kemp Smith universal.          | No. 3 Kemp Smith, gr. box fd., plain. |
| No. 4 Cincinnati vert., sgl. pulley. | No. 2 Hendey, gear box feed, plain.   |
| 42" Colburn vertical, 2 heads.       | Nos. 3, 5, 5A & 5C Becker, vert.      |
| No. 2B Milwaukee universal.          | Gooley & Edlund, production.          |
| No. 2B Milwaukee plain.              | 24" Twin spline miller, P. & W.       |
| 24" Bullard vertical turret.         |                                       |

### PLANERS AND SHAPERS.

- |                                      |                           |
|--------------------------------------|---------------------------|
| 22"x8' Gray planer.                  | 16" Niles-Bement crank.   |
| 24" Rockford b. g. crank shaper.     | 16" Steptoe crank shaper. |
| 24" Stockbridge, sgl. pulley, crank. | 16" Whipp b. g. crank.    |
| 16" Kelly crank.                     |                           |

### DRILL PRESSES.

- |  |  |
|--|--|
| Hilbert 3' radial, motor attached.     | 1, 2, 3, 6 sp. Leland-Gifford, 8" cap. |
| 36" Morris single pulley radial.       | 6-spindle Leland-Gifford, 8" capacity. |
| 24" Baker Bros. heavy duty, (3).       | 1 spindle has tapping attachment.      |
| 24", 26" Aurora, Cincinnati, etc.      | Large variety 14", 16", 20" & 24".     |
| Sipp's, with comp. tilting table, (2). |  |

### GRINDERS.

- |                                     |   |
|-------------------------------------|---|
| Bryant internal and chucking, (6).  | 20" Besly and Gardner disc.                                     |
| No. 1 Brown & Sharpe universal.     | 40" Besly and Gardner disc.                                     |
| No. 13 Brown & Sharpe universal.    | No. 65 Heald cylinder.  |
| Cincinnati universal, 4"x57" table. | No. 120 Gardner, 4 bearings.                                    |
| No. 2 Oakley universal.             | No. 6 Gardner, chuck & disc, 20"x42" table, long. & cross feed. |
| No. 1 & No. 2 Norton universal.     |   |
| 4"x20" Norton cylindrical.          |   |

### SCREW MACHINES AND TURRET LATHES.

- |   |                                      |
|---|--------------------------------------|
| Jones & Lamson, single spindle.         | 14" Gisholt, motor drive.            |
| No. 2 Warner & Swasey pl. hand.         | Nos. 0, 1, 2, 3 Foster and B. & O.   |
| No. 2 Brown & Sharpe semi-auto.         | 4", 8", 14", 2" Cleveland auto.      |
| No. 6 Foster, power long. & cross.      | 3 1/2" capacity Acme universal.      |
| No. 4 Warner & Swasey universal.        | 16"-18" Fox turret lathes, fric. hd. |
| No. 4 Warner & Swasey, screw mch.       | New Britain auto. chucking mch.      |
| 1" & 1 1/2" cap. Acme, b. g., frict. h. |                                      |

### PUNCH PRESSES AND SHEARS.

- |                                   |  |
|-----------------------------------|--|
| 100-ton Lourie hydraulic.         | No. 103 Consolidated, double crank, roller feed. |
| No. 4 Zeh & Hahneman arch press.  | No. 4 Toledo.                                    |
| No. 3 Black & Johnson.            | No. 20 Bliss.                                    |
| 10' Niagara square shears, 20 ga. | No. 14 Consolidated, (3).                        |
| 8" capacity slitting shear.       |  |

### GEAR CUTTERS.

- |                                  |                            |
|----------------------------------|----------------------------|
| No. 12 Barber-Colman.            | No. 1 Standard auto., (6). |
| No. 13 Brown & S., bevel & spur. | Waltham automatic, (4).    |

### MISCELLANEOUS.

- |  |                                      |
|--|--------------------------------------|
| Bolt cutter, 1" Landis.                | Centering mchs., single and double.  |
| Bolt cutter, 1/2" Geometric.           | Corrugating machine, steel, 7"x36".  |
| Bolt cutter, 1/2" Acme, dbl. spindle.  | Keyseater, No. 1 Baker.              |
| Bolt cutter, 1 1/2" National, dbl. hd. | Reducing or straight, rolls, 6"x36". |
| Bolt cutter, 1/2" Acme, double head.   |                                      |

## SECOND-HAND MACHINERY

### FOR SALE BY

**Chowning Regulator Corporation.** - - - **Corning, N. Y.**

#### DRILLING MACHINE.

One 3-D Colburn heavy duty drill with compound table; in good condition; can be seen in operation.

### FOR SALE BY

**McMullen Machinery Company,** - - - **Grand Rapids, Mich.**

Automatic, 8" Cleveland.  
Automatics, No. 00 B. & S.  
Band saw, Napier, metal.  
Cut-off saw, No. 4 N. & B.  
Drill, 31" Barnes, sliding head.  
Grinder, No. 6-A Bryant.  
Lathe, 9"x21 1/2" Sundstrand, mfg.  
Lathe, 24"x26 Greenlee, flat turret.  
Miller, No. 2-H Becker vertical.

Pipe mch., 8" Merrill No. 6 1/2.  
Press, Chicago scrap baler.  
Press, No. 3 Manville, d. a.  
Presses, No. 6 Manville, pillar, (3).  
Presses, No. 6B Manville, pillar, (2).  
Shear, No. 14 Pettingell, rotary.  
Shear, No. 2 W. F. Co. 38" gang.  
Welders, No. 10-A Thomson vert. (7)

Ask for Complete List.

### FOR SALE BY

**W. H. Hobbs Supply Co.,** (Phoenix Div.) **Eau Claire, Wis.**

Bolt cutter, 2" Landis, dbl. head.  
Boring mch., 48" Bullard, 2 heads.  
Drill, 42" Cincinnati-Bickford radial.  
Drill, 54" Drees radial.  
Drill, Baker vert., high speed.  
Grinding machine, 23" Landis.  
Hammer, No. 647 David Bell engrav.  
Lathe, 24"x14 1/2" Lodge & Shipley.  
Milling machine, No. 4 Cincinnati.  
Milling machine, No. 14-A Garvin.  
Milling machine, No. 2 Cincinnati.

Motors, 25, 1/2 to 50 h. p., a. c. & d. c.  
Pipe machine, 24" to 8" Williams.  
Planer, 36"x36"x12" Hamilton.  
Planer, 41"x36"x18" Belmer-Ames.  
Screw mch., No. 2 Acme univ. ck.  
Shaper, 16" Gould & Eberhardt.  
Shear and punch, 1G New Doty.  
Shear and punch, G24" Rock River.  
Shear & punch, No. 55 Beloit latch.  
Turret, 24"x24" Gisholt.  
Turret, Conradson, new.

125 Other machine tools. Sacrifice prices. Complete lists on request.

### FOR SALE BY

**W. F. Little Co.,** - - - **West 9th & Front Sts., Cleveland, Ohio**

#### LATHES.

26"x 9' Bridgeford, d. b. g., (new). 32"x22' Draper, triple geared.

#### GRINDERS

14" Pratt & Whitney vert. surface. No. 24 Gardner disc, vert. spindle.  
No. 2 Modern universal. No. 10 Besly disc.  
No. 75 Heald internal. No. 6 Bryant chucking internal.

#### PUNCH PRESSES.

No. D. G. 5 Ferracute, o. b. i. No. 3 Cady, Stiles pattern.  
No. 76 Toledo open back. No. 184 Holden, inclinable.  
No. S. G. 55 Ferracute dble. crank. No. E. G. 22 Ferracute, arch.

#### MISCELLANEOUS.

Beader, No. F-20 Yoder. Planer, 24"x10' Pratt & Whitney.  
Bolt cutter, 2" Reliance. Riveter, 1/2" Shuster, elastic blow.  
Boring mill, Lucas horiz., 2 1/2" bar. Screw mch., No. 1 Brown & Sharpe.  
Broach, 3-A LaPointe, Hudson. Spline miller, 2" Pratt & Whitney.  
Cold saw, 20" Burke. Tapper, 1/2" Rickert & S., radial.  
Hammer, 50 lb. Bradley, compact. Tapper, 1/2" R. & S. on column.  
Hammer, 250 lb. Morgan steam. Turrets, No. 4 Warner & Swasey.  
Keyseater, No. 0 Mitts & Merrill. Wiring machine, No. 1 Magee.

Partial list. Send us your inquiries. 150 other tools in stock.

## SECOND-HAND MACHINERY

### FOR SALE BY

#### Marr-Galbreath Machinery Co.,

Air compressor, 3"x4" Jacobson.  
Air compressor 4"x5" Caldwell, 2 cyl.  
Angle & bar bender, No. 9 Buffalo.  
Angle rolls, K. & R., 6x6x1"  
Arbor presses, Nos. 00 & 1 Atlas (5).  
Bending rolls, 10"x10 ga. Bertsch.  
Blowers, No. 3 Star., pressure.  
Blowers, pos. pressure, 5" outlet.  
Bolt cutters, 1", 1 1/2", 2", 3" & 4".  
Bolt cutter, 1 1/2" Reliance, dbl. head.  
Boring mills, 31" Baush: 96" Pond, 2h.  
Boring mill, 42" Colburn 2 hds., mtr.  
Boring mills, Rockford, 2" & 3" bar.  
Brake, 10"x16 ga. Chicago, steel, hd.  
Brake, 8"x20 ga. Robinson, hand.  
Brake or press, 10" Robinson, toggle.  
Bulldozers, Nos. 4 & 27 W.-W.  
Bulldozer, No. 7 Ajax.  
Compressor, 10x10" Sullivan, belted.  
Comp'r, 2500 cu.ft. L. D.G., a. c. mtr.  
Crane, 40-ton Morgan, 67' span, 4  
motors, 330 volts, d. c., new.  
Cutting-off mch., 6" Newton, int. m. d.  
Drill, radial 4' & 5' Bickford, m. d.  
Drill, radial, 5' Prentice, t. a., m. d.  
Drill, radial, 5' Western, hy., d. c. mtr.  
Drill, radial, 4' American, gear box.  
Drill, heavy gang, 4-sp., 12' table.  
Drills, 36" Hoefer; 24" Aurora, s. h.  
Drill, 30" Barnes, sliding hd., b. g.  
Drill, 22" Aurora upright.  
Exhausters, No. 8 Buffalo.  
Forging mch., 1 1/2" Acme, steel bed.  
Forging machine, 3" Acme, steel bed.  
Gear cutter, No. 11 universal Dwight  
Gear cutter, No. 3 S. & C., auto. 1x1".  
Gear hobber, No. 4 Farwell, A-1.  
Generator, 100 k. w., 240 v., d. c., con-  
nected to horiz. steam engine.  
Generator, 85 k. w., 240 v., d. c., con-  
nected to horiz. steam engine.  
Grinder, No. 60 Heald internal.  
Grinder, plain cyl., No. 12 Modern.  
Grinders, No. 1 Cincinnati, c. & t.  
Grinder, 20" Taylor & Fenn, wet tool.  
Grinder, Yankee drill, style A.  
Hack saw, 6x6 Peerless.  
Hack saw, No. 7-KC Atkins, 8x8.  
Hammer, 100 lb., single fr., steam.  
Hammer, 2000 lb. Erie, single frame.  
Hammers, sgl. fr., 350, 800, 1100, 1500.  
Hammers, 40, 90, 100 lbs. Bradley.  
Hammer, 125 lb. Bradley upr. strap.  
Ice machine, 1-ton, with motor.  
Keyseater, No. 2 M. & M., with cut.  
Lathe, 48"x27" Pond, g. h., a. c. mtr.  
Lathe, 42"x32" Am., grd. hd., m. d.  
Lathe, 24"x13" Chard, q. c. g., t. a.  
Lathe, 24"x10" Pgh., q. c. g., t. a.  
Lathe, 20"x6" Monarch, q. c. g.  
Lathe, 18"x12" L. & S., q. c. g., t. a.  
Lathe, 18"x10" Porter, s. b. g., c. r.  
Lathe, 18"x8" Lodge S., g. h., pan.  
Lathe, 16"x8" Bradford, pl. change.  
Lathe, 16"x8" Flather, taper att., ch.

#### 58 Water St., Pittsburgh, Pa.

Lathe, 15"x6" South Bend.  
Lathe, 14"x6" Monarch, plain change.  
Lathe, 14"x6" Am. brass lathe, ck.  
Lathe, 12"x8" Reed-P. g. h., s. p. d.  
Lathe, speed, 11"x4" Prentiss, t-rest.  
Miller, No. 3 1/2 Fox, hand, 24"x6"x14 1/2".  
Miller, No. 0 1/2 Cin. pl., 18"x6"x15".  
Miller, No. 3 LeBlond, pl. ind. hd.  
Miller, Hendey Lincoln No. 2 1/2.  
Miller, Knight duplex, tbl. 8 1/2"x32".  
Miller, No. 0 Kemp Smith universal.  
Miller, vertical No. 0 & 1 Bickett.  
Miller, vertical, Becker "C" & 2.  
Miller, bench, No. 3 Burke.  
Millers, hand, Whitney, (2).  
Motors, 3/4 h. p., 220 volts, d. c.,  
450/1800 rev., (2).  
Motor, 3, 2 h. p., 1 phase, 60 cycle.  
Pipe machines, 8" 6" 2" Oster.  
Pipe machines, 12", 6" & 2" Jarecki.  
Planer, 74"x54"x24" Pond, 4 hds. m. d.  
Planer, o. s., 72"x72"x18", 3 hds., m. d.  
Planer, openside, 42"x42"x16", 3 hds.  
Planer, Powell, 42"x42"x16", 4 hds.  
Planer, 26"x26"x8" Niles, 1 head.  
Planer, 24"x24"x5" New H., 1 hd.  
Press, 7 1/2" Bliss, 12" stroke, tie rod.  
Press, No. 5 Toledo, o. b. i., plain.  
Press, No. 2 V. & O., o. b. i., plain.  
Press, No. 10 Bliss o. b. i., bench.  
Press, No. 11 Perkins, pl. trim., 4" str.  
Press, No. 82 Consolidated horning.  
Punch, No. 124-A Niagara, 15" t., 1 1/2".  
Punch & shear, No. 51 Beloit.  
Punch & shear, hand, Schatz, 1 1/2".  
Punch & s., No. 2 L. & A., 30" tht., a. j.  
Punch & shear, 14" & 72" throt.  
Riveter, 1" Shuster, style A.  
Riveter, 80-A Grant, cap. 1".  
Riveter, Allen, jaw, 36x20x1 1/2" rivets.  
Riveters, 3-A & 5-A High Speed.  
Saw, Burke, 12" blade.  
Saw, cold, No. 18 Wagner, 16" saw.  
Saw, cold, No. 11 1/2 Higley, 14" saw.  
Screw mche., No. 2 W. & S., pl. hd.  
Shaper, 26" Smith & Mills, b. g.  
Shapers, 24" G. & E. old style, good.  
Shaper, 16" Cincinnati, b. g.  
Shear, single end, 9" throat, cap. 3 1/2"  
round, motor drive, new.  
Shear, Quickwork, Nos. 3 & 6 m. d.  
Shear, Niagara 16-A ring & circle.  
Shear, rotary bevel, 4" Lennox, m. d.  
Shear, rotary, 1" Lennox, 8' gap.  
Straightener, No. 2 Kane & Roach.  
Testing mchs., 100,000, 200,000 lbs.  
Tumbling barrel, Globe, 18"x15".  
Turret, 24" Gisholt, 6 1/2" h. s., t. a.  
Turret lathe, 2x24" J. & L.  
Turret lathe, No. 4 Wood Tilted.  
Turret lathe, No. 1 Bardons & O.  
Turret lathe, 28" Gisholt, t. a.  
Upsetter, 3" Acme, steel bed, A-1.  
Valve mche., 28" Pottstown, 3-w., m. d.  
Valve tapper, 4" Pottstown, 3-w., m. p.

## SECOND-HAND MACHINERY

### FOR SALE BY

**Clinton Machinery Co., - - 128 So. Clinton St., Chicago, Ill.**

#### MILLING MACHINES.

No. 3H LeBlond, h. d., universal, No. 1 Chicago, hand type, with dividing head, vise and v. h.  
 fully equipt, (2). Pratt & Whitney and Hardinge bench types.  
 No. 2H LeBlond, h. d., plain.  
 No. 2 Cincinnati univ., fully equipt.

#### LATHES.

19"x8' Springfield, s. q. c., d. b. g., 14"x6' American, q. c. g., swings 16 1/2".  
 c. r., complete with chuck. 14"x6' Hendey, q. c. g., taper att., (2).  
 16"x8' Prentice, q. c. g., complete. 14"x6' Reed, l. c. g., with taper att.  
 16"x6' American, q. c. g., swings 18 1/2". 12"x5' Hendey, q. c. g.  
 15"x8' Carrol & Jamieson, s. q. c., 10"x4' Seneca Falls, with draw-in attachment and collets, complete.  
 d. b. g.

#### DRILL AND PUNCH PRESSES.

10" new Champions, bench (15) \$30. ea. No. 1 Rockford, o. b. i.  
 14" new Champions, fl. type, \$65. ea. No. 1 Consolidated, o. b. i. safety dev.  
 20" Milwaukee, wheel & lever feed. No. 1 1/2 Consolidated, o. b. i. s. dev. (2).  
 20" Rockford, wheel & lever fd., b. g. No. 3 Moore, o. b. i., safety device.  
 24" Superior, b. g., s. h. No. 20 Bliss, o. b. i., 3" stroke.  
 No. 36 Niagara, geared, like new. No. 4 American Can, o. b. i.

#### SHAPERS.

14" Smith & Mills crank, (2). 20" American, b. g., with universal table.

#### MISCELLANEOUS.

Cold saw, No. 5 Nutter-Barnes, with Hack saws, Nos. 1 & 2 Marvel pwr. auto, sharpener & ten h. s. saws. Hammer, 2A h. d. high speed.  
 Grinder, No. 1 Grand Rapids univ. Screw machine, No. 1 Warner & S.  
 Grinder, No. 1 LaSalle, surface. Shear, 30" power square, 14 gauge.

Your requirements bring our quotation; only a partial list.

### FOR SALE BY

**Jones Machine Tool Co., 528-532 E. Front St., Cincinnati, O.**

#### LATHES.

16"x 6' LeBlond, q. c. g. \$ 375. 20"x10' Lodge & Shipley, q. c. g. \$ 850.  
 16"x 8' Hendey, q. c. g. & t. a. 975. 30"x12' Houston Stam., q. c. g. 750.  
 18"x10' Reed Prentice, grd. hd. 775. 26"x12' Reed, l. c., t. a. 500.  
 20"x14' American. 475. 30"x16' Lodge & Davis. 850.

#### MILLING MACHINES.

No. 1 1/2 Valley City universal. \$ 500. No. 3 Brown & S. pl., (2), ea. \$ 800.  
 No. 3 Cincinnati plain. 950. No. 3 LeBlond plain. 900.  
 No. 2 Cleveland, s. p. drive. 750. No. 3 B. & S. vert., s. p. drive 1250.

#### RADIALS AND DRILL PRESSES.

48" American, s. p. drive. \$1200. 24" Hoefer, sta. head. \$ 175.  
 48" Bickford, cone drive. 475. 24" Rockford, sliding head. 225.  
 72" Niles, cone drive. 750. 30" Cincinnati, sliding hd., t. a. 325.  
 72" Dreses, motor drive. 1500. 42" Bickford, stationary head. 225.

#### PUNCH PRESSES AND SHEARS.

No. 2 Niagara. \$ 140. No. 6 Whiting, single end. \$ 475.  
 No. 3 Consolidated, o. b. inc. 350. No. 4-Verdin, b. g. 675.  
 No. 18 Bliss, o. b. inc. 175. No. 85 Bliss, d. b. g. 1500.

#### PLANERS AND SHAPERS.

24"x 6' Powell 1 head. \$ 600. 16" Smith & Mills shaper. \$ 325.  
 30"x 6' Gray, 2 heads. 850. 25" Smith & Mills, b. g. 875.  
 48"x36"x12' Cincinnati, 2 hds. 2300. 21" American b. g. shaper. 775.

#### MISCELLANEOUS.

Bolt cutters, 1" & 2" Acme. Gear hobber, Barber-C. No. 12 \$1075.  
 Boring mill, 42" Bullard, two Grinder, 10x50 Norton. 475.  
 heads. \$1200. Hammer, steam, 800 lb. Niles. 900.  
 Chain hoists, various sizes, (50). Keyseater, No. 2 Baker. 475.  
 Gear cutter, 48" B. & S. No. 4. 750. Mill, 36" Bullard vertical. 1500.  
 Gear hobber, 24" S. & S. 550. Slotter, 10" Niles vertical. 500.

Write for our latest Stock List.

## SECOND-HAND MACHINERY

### FOR SALE BY

**Sommerfeld Machine & Mfg. Co., 216 Second Ave., Pittsburgh, Pa.**

Boring mill, 42" Bullard, two heads, ..... \$1,000.  
Gear cutter, 72x13 Brown & Sharpe No. 6, practically new, ..... 3,750.

### FOR SALE BY

**A. F. Strafer,**

**30 Church St., New York City**

#### BORING MILLS.

12' Betts, heavy modern, motor dr.  
12' Betts, geared feed, belt drive.  
10'-16" Niles extension.  
96" Betts vertical, arranged motor dr.  
72" Niles-B.-P., heavy duty, mtr. dr.

#### DRILLS, RADIAL AND UPRIGHT.

7' and 6' Baush, plain, belt drive.  
6' Cincinnati Bickford, full univ.  
6' Niles-B.-P. semi-universal.  
5' Western plain, single pulley dr.

#### GRINDERS

18"x96" Norton plain.  
10"x36" Norton plain.  
10"x24" Landis plain, self contained.

#### GEAR CUTTERS.

36" G. & E., spur and bevel.  
26" B. & S. No. 3, spur gears.

#### LATHES

50"x30' Pittsburgh, modern, q. c.  
48"x32' Pittsburgh, blocks to 80"  
41"x21' Niles-B.-P., triple geared.  
42"x16' Putman, geared head.

#### TURRET LATHES.

34"x36" Acme, flat, modern, geared head, chuck equipment.  
18" Libbey, s. p. d., rapid traverse.  
24" Gisholt, motor drive, modern.  
24" Gisholt, fine condition.  
24"x26" J. & L., bar equipment.

#### MILLING MACHINES.

No. 4 Cincinnati plain, cone type.  
No. 3 Kempsmith univ., cone type.  
No. 3-B heavy Brown & Sharpe pl.  
No. 3 Brown & Sharpe plain, cone.  
No. 2-B heavy Brown & S. plain.

#### PLANERS.

12"x12"x25' 4 heads, belt drive.  
54"x16' Wm. Sellers, 4 hds., belt dr.  
54"x22' Niles-B.-P. rev. motor drive.  
48"x30' Niles-B.-P. rev. motor drive.  
48"x16' Niles-B.-P. rev. motor drive.  
42"x10' Pond, rev. motor drive.  
42"x30' Niles-B.-P. rev. motor drive.

#### PUNCHES AND SHEARS.

No. 4 Hilles & Jones, double, 48" throat, motor drive, a. c.  
No. 5 Hilles & Jones, 48" thrt., m. d.  
No. 6 Hillis & Jones, 60" thrt., m. d.

#### MISCELLANEOUS.

Bending rolls, 4"x20' Hilles & Jones.  
Bending rolls, 4"x7' Wm. Sellers.  
Bending rolls, 4"x10' 6" Southworth.  
Bolt cutter, Landis, 14", double.  
Crane, 50-ton, 86' spar, P. & H., d. c.  
Drill chucks, 1" capacity, new.  
Fire pump, 1000 gal. Knowles, atm.

Flanging clamp, 96".  
Hammers, No. 3-B Nazel, m. d.  
Hammer, No. 4-B Nazel, m. d.  
Hammer, No. 4 type "I" Hazel.  
Slotter, 18" Newton, 48" table.  
Surface plates, B. & S. 12"x18".  
Tapping attach., Errington 1" cap.

## SECOND-HAND MACHINERY

### FOR SALE BY

**M. A. Wertman, . . . 505 Superior Bldg., Cleveland, Ohio**

Bench centers, 8"x36" B. & S. improved, 95¢	\$ 50.
Blower, Buffalo, 8" outlet	15.
Disc grinder, No. 120 Gardner ball bearing, complete, 90¢	300.
Drill, National-Acme 6-spindle, complete, 90¢	375.
Lay-out tables, cast iron, 3'x8', (4)	each 75.
Miller, No. 3 Kemp Smith universal, new.	
Screw slotter, No. 1 Garvin	25.
Thread millers, No. 3 Lees-Bradner, collet type, (3)	each 100.
Turret lathe, No. 2 Milholland, g. f. h., power feed turret	350.

### FOR SALE BY

**Tubor, Velick & Co., Inc., . . . 628-630 W. Lake St., Chicago, Ill.**

**Telephones: Monroe 4199-6813. No Branches**

#### PUNCH PRESSES.

No. 4 American Can.	Long & A. horn punch, cap. 1½x1.
No. 5 American Can (2).	Swaine geared, (2).
No. 15 Torris Wold.	No. 5 Rockford, (2).
Perkins punch presses, ½" str. (20).	Bliss bench presses, (5).
No. 15 single end punch.	

#### DRILL PRESSES.

14" Excelsior.	Demco high-speed drills.
20" b. g., p. l., new, \$130.	Bench type drills.
20" drill presses (40), each \$40.	3' American radial.
20" Weigel.	3½' Hilbert radial.
20" Reed-Prentice.	3½' Canedy-Otto radial.
12-spindle Natco drill.	Drill presses, 1-2-3-4 sp. Avey, h. s.

#### MILLING MACHINES.

Nos. 2 & 4 LeBlond plain.	No. 3 Cincinnati universal.
No. 4 LeBlond univ., sgl. pulley dr.	No. 2 Cleveland universal, s. p. dr.
No. 1 Cincinnati universal.	A number of hand millers.

#### LATHES.

12"x5' Hendey.	17"x 9' Chard, q. c., (9).
12"x 5' South Bend.	18"x 6' Lehmann, q. c., (2).
16"x 6' Hamilton, q. c., (2).	24"x10' Canadian, q. c., d. b. g., (3).
16"x 6' Sidney, q. c., (2).	22"x10' Cisco, q. c.
16"x 8' Canedy-Otto.	26"x12' Prentice.

#### PLANERS.

30"x30"x 8' Fitchburg.	36"x36"x 7' Flather, 2 heads.
30"x30"x12' Niles-B.-P., 2 heads.	

#### SCREW MACHINES.

4-sp. Gridley automatic, ½" capacity.	No. 2 Smith, hand.
No. 00 B. & S. automatic, serial 5801.	Pratt & Whitney, hand, (3).
Lockers, steel, single, (1,000).	Nos. 1, 2, 3 and 4 Foster screw mchs.

#### GRINDERS.

Bath universal, with magnetic chk.	No. 14 Besly, disc.
Gardner No. 6 disc grinder.	Emery grinders, #2 and up.

#### WOOD-WORKING MACHINERY.

Boring mills, Andrew, (3).	Saw table and jointer combined,
Shapers, dbl. spdl., Whitney, & Fay.	portable.
Swing saws, Porter, (4).	

#### MISCELLANEOUS.

Buffers, U. S. and Westinghouse,	Pressed steel stools, with backs.
5 h. p., b. b.	Punch press, No. 3 Thomas.
Hack saws.	Punch press, No. 4 V. & K.
Motors, 75 h. p. G. E., a. c., slip ring,	Saw mandrels, #3.
600 r. p. m., (2).	Shaper, 15" Niles.
Motors, a. c. and d. c.	Shaper, 24" Kelly, b. g.
Pressed steel bench legs, (1,000).	Thread hobber, Pratt & Whitney.
Pressed steel hangers and bearings,	Time clocks, International.
all sizes.	Woodworking machines.

Leather belting. Pulleys, shafting and hangers.



## SECOND-HAND MACHINERY

### FOR SALE BY

**D. E. Rowlingson,** - - - - - **Box 265, Utica, N. Y.**

Buffing stands, new and used.....	\$25. to \$125.
Drill press, bench, Burke, chuck and belt, new.....	25.
Emery stands, all sizes, new and used.....	\$10. to 20.
Engine lathe, Hendey, 3 chucks, good as new.....	250.
Hack saws, power, Fairbanks make.....	35.

### FOR SALE BY

**Herman L. Winterer,** **943-53 N. Front St., Philadelphia, Pa.**  
**LATHES.**

43"x17' 4" Bement-Miles.	20"x8' 6" Walcott, d. b. g., c. g., (3).
37"x14' Johnson d. b. g., q. c. f., t. a.	20"x 8' Whitcomb Blaisdell, q. c. g.
32"x12' Pittsburgh, heavy duty, q. c. g.	19"x10' Draper, patent head.
27"x12' Bullard.	18"x 8' Davis, q. c., d. b. g.
26"x11' Wickes, q. c. g.	18"x 7' Chard, d. b. g., semi q. c. g.
25"x10' Niles, q. c. g.,	18"x6' to 8' lathes, (6).
25"x14' Hendey, q. c. g., taper attach-	16"x 8' Greaves & Klusman, b. g., t. a.
ment, oil pan, (3).	14"x 8' Filsmith, q. c. g.
24"x14' Porter.	And many others.
21"x8' LeBlond.	

### TURRET LATHES.

34"x28" Pond, triangle.	No. 3 Kempsmith.
3x36" Pratt & Whitney, hollow hex.	14"x 8' Warner & Swasey.
20x7' 6" Pratt & Whitney, back grd.	16"x6' Johnson, back grd.
20x7' Bridgeport, 24" h. s.	No. 3 Bardons & Oliver back grd.
19"x7' Fay & Scott, back grd.	14"x5' 3" Pratt & Whitney, (2).
No. 22 1/2 Garvin Monitor.	No. 3 Foster Kimball.

### DRILL PRESSES.

42" Gang radial, s. p. speed box.	34" Barnes, s. h., geared face, comp.
40" Barnes horizontal radials, (3).	table.
36" Bickford radial, circular base,	24" Sibley & Ware, sliding head.
motor driven.	4-sp. type C, Taylor & Fenn, pwr. fd.
28" Rockford, q. c. g. feed, (2).	Drill presses, assorted sizes.

### MILLING MACHINES.

No. 5 Cincinnati, table 9'x50' 1/2".	No. 3 Hendey-Norton, q. c. g.
No. 15 Garvin, table 12x42".	No. 5-C Becker vert., rotary table.
No. 3 Becker-Brainard, new model,	No. 1 Milwaukee plain.
q. c. g., vertical attachment.	

### PLANERS AND SHAPERS.

12'x10'x25' Sellers planer, 4 heads.	16" Potter & Johnston crank shaper.
48"x37"x9' Sellers, 2 heads.	15" Lodge & Davis shaper.
48" Morton draw-cut shaper.	15" Potter & Johnston shaper.
16" Hendey shaper, shifting belt.	14" Warren shaper.

### MISCELLANEOUS.

Boring mill, car wheel, 60" Newton.	Molding machine, 24" Taber, with
Boring, drilling and milling machine,	roll over.
17 1/2' Bement Niles horizontal.	Punch presses, all sizes, (55).
Boring mill, No. 1 Sellers, horizon-	Punch, multiple, No. 5 H. & J.,
tal, 2 1/2" bar.	gate pat., 86".
Boring mill, No. 3 Binsse, horizon-	Punch & shear, No. 2 H. & J., dbl.
tal, 2 1/2" bar.	end, 20" th. cap., 1 1/2" in 1".
Grinder, 13 1/2"x5' Landis universal.	Punch, No. 2 H. & J., 15" th., arch.
Grinder, disc, No. 17 Besly.	jaw, 1 1/2" in 1".
Hammer, 15 lb. Bradley helve.	Punch, horiz., L. V., grd., cap. 1".
Hammer, 25 lb. Little Giant, m. d.	Punch & shear, Industrial Wks. d. e.,
Hammer, 40 lb. Bradley, helve.	capacity 1 1/2" in 1 1/2"; shearing 1"x6".
Hammer, 60 lb. Hotchkiss.	Riveter, air, 6" gap Allen, cap. 1 1/2".
Hammers, 60 lb. Bellefonte upright; 2	Slotter, 14" Niles.
Hammer, 750 lb. Merrill board drop.	Tooth rounding mche., Schuchardt
Keyseater, 18" stroke Morton.	& Schutte.
Pipe machine, 4" Cox.	

Large assortment of General Machinery. Send for complete Price List.

## SECOND-HAND MACHINERY

### FOR SALE BY

**McCoy-Brandt Machinery Co., 210-14 Penn Ave., Pittsburgh, Pa.**

Bending rolls, 10' x 8" Wickes, m. d.  
Bending roll, 8' x 8", drop end.  
Bending rolls, 16' x 8" Wickes, m. d.  
Boring mill, 36" Bullard, rapid prod.  
Boring mill, 51" Baush, 2 heads.  
Boring mill, 10" Niles, 2 heads.  
Boring mill, 6" bar, Niles horiz.  
Bulldozers, Nos. 25 & 30 W.-W.  
Drills, radial, 5' Prentice, s. p. d.  
Forging machine, 34" Acme, steel.  
Forging machines, 2" and 3".  
Gear generator, bevel, 8" Gleason.  
Grinder, No. 4 Gardner, double disc.  
Lathe, No. 5 Rivett precision, tur., etc.  
Lathe, 14' x 6" Hendey, grd. hd., m. d.  
Lathe, 16' x 10" L. & S., cone, taper.  
Lathe, 17' x 8" Sidney heavy duty.  
Lathe, 24' x 26" American, q. c. g., m. d.  
Lathes, 26' x 12" Putnam, h. d.  
Lathe, 30' x 18" L. & S., m. d., t. a.  
Lathe, 30' x 20" New Haven, double  
back geared, good.  
Lathe, 36' x 20" Sidney, h. d., q. c. g.  
Lathe, 48' x 36" Bridgeford, m. d.  
Lathe, 60' x 25", cone, cheap.  
Millers, horiz., Nos. 1 & 5 Cincinnati.  
Millers, Nos. 1 & 2 Cleve. pl., s. p. d.

Miller, No. 4 Cin'ti hi-power plain.  
Miller, vertical, No. 3 B. & S., m. d.  
Miller, No. 24 Rockford pl., s. p. d.  
Millers, Nos. 0, 1, 2 & 3 plain, cone.  
Millers, Nos. A-B-1 Becker, s. p. d.  
Millers, Nos. 3C and 6 Becker vert.  
Miller, No. 6 Whitney, hand.  
Nut tappers, 10 spdl. Natl., cap. 1 1/2".  
Pipe machines, 12", 10", 8", 4" & 2".  
Planer, 30' x 30' x 8" N. B. P., 1 head.  
Punch, multiple, 72" bet. housings.  
Riveter, 36" reach, 21" gap, 10" cyl.  
Rolling mills, 12" bar & 16" reduct.  
Screw machines, No. 0 Brown & S.  
Shaper, 24" Hollingworth, b. g., crank.  
Shear, H. & J., cap. 90" x 1" plate.  
Shears, guil., cap. 24" and 2" and 1".  
Shear, splitting, 24" tht., Ryerson, 1".  
Shear, rotary bevel, Lennox, cap.  
1 1/2" plate.  
Straightener, No. 2 Abramson.  
Straighteners, Nos. 3 & 4 K. & R.  
Straighteners, Nos. 1 & 2 K. & R.  
Testing mche., 200,000 lb. Riehle.  
Turret lathe, 3' x 36" J. & L.  
Turret screw mches., No. 0 Foster.

### FOR SALE BY

**Fitzsimmons & Cole Machinery Company**

**1208 House Building, Pittsburgh, Pa.**

Air compressor, Ingersoll, 6x6", b. d.  
Air compressor, Ingersoll - Rand,  
888 cu. ft., m. d.  
Bolt cutters, 14" 2", 24" 4" Landis.  
Boring mill, 62" Bullard, b. d.  
Boring mill, 84" Bickford, m. d., new.  
Die sinker, No. 3 Pratt & Whitney.  
Die sinker, No. 4 Pratt & Whitney.  
Drill, radial, 5' Prentice, m. d.  
Flanger, McCabe, 1/2" capacity.  
Gear cutter, No. 13 Brown & Sharps.  
Gear planer, 24" Gleason, bevel.  
Grinder, 16' x 48" Landis, crankshaft.  
Grinder, 16' x 52" Landis, plain.  
Hammer, 50 lb. Mayer, upright.  
Hammer, 200 lb. Bradley, helve.  
Hammers, 2-B, 3-B, 4-B & 4-N Nazel.  
Hammers, stm. drop, Chambersburg  
1500, 2500 and 4000 lbs.  
Lathe, 18' x 8" LeBlond, q. c. g., b. d.  
Lathe, 20' x 16" L. & S., t. a., q. c. g.  
Lathe, 32' x 34" Pittsbg'gh, 2 car., m. d.  
Lathe, turret, 5' x 36" Bardons & O.  
Miller, No. 4 Cincinnati pl., s. p. d.  
Miller, univ., Oesterlein, 25' x 10".  
Pipe machine, 12" Jarecki, b. d.  
Planer, 36' x 36" x 24" Pond, 4 hds., b. d.  
Planer, 48' x 38" x 14" Pond, 4 hds., b. d.  
Planer, 96' x 36" x 20" Pond, 4 hds., m. d.

Planer, 120' x 90' x 27" Detrick & H.  
Planer, o. s., Cleveland, 36' x 36" x 16".  
Planer, o. s., Cleveland, 48' x 48" x 20".  
Press, baling hyd. No. 12-PLogemann  
Press, No. 371 Bliss, s. a., 6" stroke.  
Press, wheel, 100-ton Caldwell.  
Punch & shear, Cleveland 24" thrt.,  
1 1/2" thru 1", arch. jaw.  
Punch & s., Pels, type RBLUEF-26.  
Punch, hor., Cleveland, 1" thru 1".  
Punch, multiple, No. 5 H. & J., 10".  
Rolls, angle bending, 4' x 4" x 1/2".  
Rolls, angle bending, 6x6x1/2" K. & R.  
Rolls, bending, 4' 6" x 1/2", m. d.  
Rolls, bending, 8' x 1/2" N. B. P.  
Sand blast, MacLeod, 36' x 36".  
Saw, hack, Atkins 6' x 6", b. d.  
Shaper, 20" Gould & Eberhardt, b. d.  
Shaper, 24" Cincinnati, b. g., m. d.  
Shaper, 24" Stockbridge, b. g., b. d.  
Shear, alligator, Carlin, cap. 1 1/2".  
Shear, angle, L. & A., cap. 8' x 8" x 1 1/2".  
Shear, guil., No. 3 H. & J., cap. 24" sq.  
Shear, bevel, Ryerson 1", m. d.  
Straightening roll, 9-roll, rolls 3x42".  
Straightener, beam, No. 4 H. & J.  
Testing machine, 100,000 lbs. Riehle.  
Welder, No. 20-A Thompson, butt.

## SECOND-HAND MACHINERY

### FOR SALE BY

#### Foster Machinery Company,

10203 Quincy Ave., Cleveland, O.

Angle shear, No. 2 Cleveland, 4x4x4" angle.

Boring mill, vertical, 42" Bullard.

Grinder, No. 60 Heald, cylinder.

Grinder, Greenerd, tool & cutter.

Grinder stand, Western No. 4, two 14" wheels.

Grinder, Dumore, tool post.

Lathe, 16"x6" Monarch.

Lathe, 18"x8" Lodge & Shipley.

Miller, No. 90 Brown & S. hand.

Miller, No. 90 Owen, Fox type.

Press, No. 1 Consolidated.

Riveter, Hanna, 24" throat, 15" gap, 1" rivet.

Rivet hammers, No. 2-A, No. 4-A.

Shaper, 16" Garvin.

Trolleys, 1-beam, 1 & 2 ton.

SHEARS.

Bertsch 10"x14 ga., power.

No. 210-A Pexto, power.

### FOR SALE BY

#### Brownell Machinery Co.,

150 Pine St., Providence, R. I.

#### BORING MILLS.

No. 1½ Beaman & Smith horizontal

drilling, tapping, boring and mill-  
ing machine, 3½" spindle.

24" Bullard rapid production.

30" Baush vertical.

#### DRILLS

4' No. 7 Prentice Bros. plain radial.

5' Prentice single pulley drive radial.

25" Weigel sliding head.

3-spindle Cincinnati.

#### GEAR CUTTERS

No. 3 Brown & Sharpe 26x8, spur.

No. 3-H Brown & Sharpe 24x8, spur.

No. 4 Brown & Sharpe 36x9, spur.

No. 13 B. & S. 18x4, spur & bevel.

#### GRINDERS.

No. 11 B. & S. plain 4x30.

No. 12 B. & S. plain 8x36.

No. 10 B. & S. plain 6x20.

No. 1 B. & S. small auto. surface.

Garvin hand feed surface.

No. 2 B. & S. cutter & reamer.

No. 2 Norton tool & cutter.

Waterbury surface.

Grand Rapids drill 1 to 1½".

#### MILLING MACHINES.

No. 1½ Brown & Sharpe universal.

No. 2 heavy B. & S. plain 28x8x19.

No. 2 Brown & Sharpe vertical sp.

No. 13 Garvin plain, b. g.

No. ½ Van Norman duplex.

U. S. and Whitney hand.

#### PLANERS AND SHAPERS.

45"x72"x20" Gray, 4 heads.

36"x36"x22" Pond, 2 heads.

26"x36"x12" Gray, 2 heads.

26"x30"x14" Whitcomb-B., 2 heads.

24"x24"x 6" Powell, 1 head.

17"x20"x 4" Whitcomb-B., 1 head.

17"x17"x 4" Whitcomb, 1 head.

18" Potter & Johnston shaper.

16" Ohio shaper, plain.

#### PRESSES.

No. 1 Bliss d. a. cam, roll feed.

No. 2½ Manville d. a., o. b., roll fd.

No. 1½ Manville s. a., o. b., dial feed.

No. 3-A Standard s. a., p. p.

No. 3 Manville s. a., p. p.

No. 4 Manville s. a., p. p.

No. 1 Standard power screw, 20-ton.

No. 7 Zeh & Hahemann percussion,

50-tons.

No. 1-A Adams Bros. foot presses.

#### SCREW MACHINES AND TURRET LATHES.

No. 6 B. & S. plain head, wire feed.

No. 2 F B. & S. constant speed.

No. 4 B. & S. plain head, wire feed.

No. 6 B. & S. plain head, wire feed.

3x36 J. & L. flat turret.

No. 2-P P. & J. piston & pist. ring.

6-A P. & J. automatic chucking.

#### MISCELLANEOUS.

Broaching mche., No. 2 Lapointe.

Cornice brake, 4', No. 16 gauge.

Hack saw, 8x8 No. 7-K Atkins

Kwik-Kut, h. s., power.

Lathe, 20"x16" Beaman & Smith,  
engine, 12' centers.

Lathe, 22"x20" Fitchburg.

Lathe, 60"x14" Putnam engine.

Marking mche., No. 6 Martin, hand.

Rolling mill, 5x8 McWilliams.

Slotter, 12" Bement Miles.

Shaft straightener, Rockford.

Swaging mche., No. 2 Standard rot.

Tapper, No. 2 Garvin vertical.

#### MAGNETIC CHUCKS

50—Brand new Taft-Peirce Magnetic Chucks, 110 v., d. c., 8x10, suitable for

No. 2 surface grinders.

## SECOND-HAND MACHINERY

### FOR SALE BY

**J. L. Lucas & Son, Inc., - - - 3 Fox St., Bridgeport, Conn.**

Backing-off lathe, Flather, with 180 miscellaneous high speed tools for backing off standard gear cutters.

Demagnetizer, Heald style 1, very excellent condition, price \$65.

Gauge blocks, Johansson one set (81), with four holders and three pairs of jaws; very excellent condition; price for the lot, \$175.

Pyrometers, Brown stationary type H; two Brown type U, single record continuous recording pyrometers; will be sold at small fraction of cost.

### FOR SALE BY

**Hill, Clarke & Co., Inc., - 156 Oliver St., Boston 8, Mass.**  
**AUTOMATICS.**

Brown & Sharpe No. 2.

**BORING MILL.**

Niles-Bement-Pond 52" vertical with two swivel heads.

**RADIALS.**

Western, 4' arm.

Prentice, 5' arm.

**KEYSEATER.**

Mitts & Merrill No. 5 well equipped.

**PLANERS.**

Gray 24"x6', one head.

Whitcomb-Blaisdell 30"x8', 2 heads.

Cincinnati 24"x6', one head.

D. W. Pond 36"x16', 2 heads.

Whitcomb-Blaisdell 24"x8', 2 heads.

**MILLING MACHINES.**

Milwaukee No. 1-A mfg., single overarm.

Brown & Sharpe No. 2B plain.

Milwaukee No. 1B pl., agl. overarm.

Milwaukee No. 3B pl., agl. overarm.

Brown & Sharpe No. 14 plain.

Brown & Sharpe No. 5 heavy plain.

Garvin No. 1 universal.

**VERTICAL SURFACE GRINDER.**

Pratt & Whitney, 24" feed.

**PIPE MACHINE.**

Bignall & Keeler, 8" capacity.

**SHAPERS.**

Rhodes 32" vertical.

Smith & Mills 20" crank.

### FOR SALE BY

**Brown Machinery Co., - - - 2323 N. 9th St., St. Louis, Mo.**

Buffing lathe, Hisey 3 h. p. electric, a. c. \$ 100.

Buffing lathe, U. S. 3 h. p. electric, a. c. 125.

Drill, 24" Aurora, sliding head, tapping attachment. 275.

Drill, Baush No. 3 multiple, cap. 30 spds., rectangular hd. 20x40". Price 1500.

Drill, radial, horizontal, No. 1 Barnes, d. e. 350.

Gear shaper, 36" Fellows. 500.

Grinder, cylinder, No. 60 Heald. 850.

Grinder, No. 14 Gardner, b. b., disk, dry, 20" disks, good cond. Price 400.

Grinder, No. 6 Besly two-spindle disk, 20" disks. Price 350.

Grinder, LaSalle automatic surface, good condition. Price 275.

Grinder, No. 1 Brown & Sharpe universal, 10x24; good condition. Price 375.

Grinder, No. 14 Besly single spindle ring wheel. Price 400.

Grinders, emery, St. Louis and Western.

Hammer, size A United, motor driven. 450.

Lathes, 16"x6" Monarch, heavy duty, each. 375.

Lathe, 20"x8" Reed. 360.

Miller, No. 1B Fox, hand & pwr. fd., 18x6x14; new, never used. Price. 400.

Motors, (40).

Planer, 60"x60"x20" Niles, 3 heads.

Polishers and buffers, drop head, New Britain, each. 50.

Press, geared, Stiles & Parker, weight about 9000 lbs.

Shear, Marshalltown No. 134 rotary splitting, cap. 4" plate; 4' throat; arranged for motor drive. Like new. Price 750.

## SECOND-HAND MACHINERY

### FOR SALE BY

**The Reeve-Fritts Co., 558-560 W. Washington Blvd., Chicago, Ill.**

Band saw, 14" Racine bench, motor.  
Drill, 18" Leland-Gifford, rd. col.  
Drill, 4-spindle Barr,  $\frac{1}{4}$ " cap.  
Drill, 14" U. S. sensitive,  $\frac{1}{4}$ " cap.  
Grinder, 5"x10" Greenfield plain.  
Grinder, No. 103 Rivett internal.  
Lathe, 16"x6" Bradford, c. r.  
Lathe, 14"x8" Hendey, q. c. g., taper.  
Lathe, 16"x8" Flather, q. c. g., taper.  
Lathe, 26"x12" Blaisdell.  
Miller, No. 0 Le Blond plain.

Miller, No. 3-B heavy B. & S. plain.  
Planer, 32"x24"x6" Rockford.  
Press, No. 2 L. & J., o. b. i.  
Press, No. 3 Rockford, o. b. i.  
Press, No. 37 Bliss, s. s.  
Rivet spinner,  $\frac{1}{4}$ " Grant.  
Riveter, No. 4A H. S. Hammer.  
Screw machine, No. 0 Foster, with  
a. c., w. f.  
Shaper, 12" Smith & Mills.  
Tapping mch.,  $\frac{3}{16}$ " R. & S. bench.

### FOR SALE BY

**The Strong, Carlisle & Hammond Co., Cleveland, O., Detroit, Mich.**

#### ENGINE LATHES.

14"x 6' LeBlond, l. c. g. and chuck.  
14"x 6' Hamilton.  
14"x 6' American, c. r. and t. a.  
14"x 6' Porter, c. r. and t. a., l. c. g.  
14"x 8' Monarch, c. r., stand, pattern.  
16"x 6' South Bend, c. r., complete.  
16"x 8' Lodge & Shipley, old style,  
c. r., q. c. g.

16"x 8' Chard, c. r. and t. a., q. c. g.  
18"x 8' Prentice c. r., l. c. g., chuck.  
18"x 8' American, 3-step cone, d. b.  
g., q. c. g.  
18"x 8' Schumacher-Boye & Emmes,  
c. r., 5 step cone, s. b. g., q. c. g.  
18"x10' Star, 4-s. c., s. g., with 16"  
4-jaw ind. chuck.

#### TURRET LATHES AND SCREW MACHINES.

No. 2-A W. & S. g. h. tur. lathes.  
No. 3-A W. & S. g. h. turret lathe.  
26" Gisholt heavy duty turret lathe.  
2"x24" Jones & L. g. h. flat turret.  
No. 00 Brown & Sharpe auto., (3).  
No. 0 Brown & Sharpe auto. (2).  
No. 4 W. & S., p. h., a. c. & b. f.

No. 2 W. & S., p. h., a. c. and b. f.  
No. 4 Warner & S., g. f. h., a. c. and  
b. f.  
18" Libby, factory rebuilt.  
No. 2-G B. & S. automatics (2).  
No. 2 B. & S. turret forming (2).

#### DRILLING MACHINES.

22" Cincinnati, sliding head, friction  
back geared, power feed.  
24" W. F. & J. Barnes, sliding head,  
back geared and power feed.  
2' arm Fosdick & Holloway plain  
radial, with t. a.  
6' arm Western radial, with tap. att.,  
arranged for motor drive.

24" Baker heavy duty.  
No. 2-D Minster heavy duty, with  
compound table.  
12" Mechanics, friction driven.  
14" 4-sp. Leland-G., h. s., b. b. (2).  
14" 2-spdl. Avey, h. s., b. b., (2).  
14" 3-spdl. Henry & W., h. s., b. b.  
14" 4-spdl. Henry & W., h. s., b. b.

#### MILLING MACHINES.

No. 0 Bickett, hand, bench type (3).  
Toledo hand milling machines.  
No. 13-B B. & S. mfg. type, (2).  
No. 3 Brown & Sharpe vertical.

No. 1 Brown & Sharpe vertical.  
No. 22 Garvin vertical, with circular  
milling attachment.  
No. 1-Y Brown & Sharpe plain.

#### GRINDERS.

Greenfield univ. cutter and reamer,  
complete with attachments.  
No. 6-A Bryant internal.  
No. 1 LeBlond cutter grinder.

Type "DE" Hisey-Wolf internal.  
No. 11 B. & S. plain grinders.  
Plain emery wh'l stand with column.

#### SHAPERS AND PLANERS.

14" Rockford plain crank.  
16" Cincinnati back geared crank.

16" Hendey friction, (2).  
22"x22"x 5 Putnam planers (2).

#### METAL CUTTING TOOLS AND SQUARING SHEARS.

Higley cold saw.

3" new Davis cutting-off machine.

#### GEAR CUTTERS AND HOBBERS.

26" & 36" No. 3 Brown & S. auto.  
No. 3-26" late type motor driven  
Brown & S., complete with motor.  
No. 18 G. & E. vert., for spur & spiral.

No. 3 Barber-Colman.  
No. 13 Brown & Sharpe auto.  
No. 12 B. & S., bevel.

#### HAMMER.

Quickwork body hammer.

## SECOND-HAND MACHINERY

### FOR SALE BY

Wm. C. Johnson & Sons Machinery Co.,

1211-1223 N. 12th St.,

St. Louis, Mo.

#### PLANERS.

24"x24"x 6' Powell.  
30"x30"x 8' Cleveland open side.  
32"x32"x10' Cincinnati, 2 heads.

36"x36"x10' Flather, 2 heads.  
42"x42"x16' Powell, 3 heads.  
48"x48"x14' Gray, 2 heads.

#### DRILLS.

20" Champion.  
22" W. F. & John Barnes.  
24" Aurora sliding head.  
3' Canedy-Otto post drill.  
2-spindle Henry & Wright.

4-spindle Henry & Wright.  
4-spindle Avey.  
4' arm Bickford radial.  
5' arm Pond radial.

#### LATHES.

15"x 7' Carroll-Jamieson.  
15"x 6' Monarch, q. c. g.  
20"x10' Rahn & Mayer.  
20"x10' Lodge & Shipley.  
21"x10' LeBlond, all geared head.  
17"x 7' Oliver heavy duty.

26"x12' Putnam.  
26"x12' Bridgeford.  
26"x16' Whitcomb-Blaisdell.  
32"x16' F. E. Reed.  
44"x24' Pond, triple geared.

#### MILLING MACHINES

No. 1 $\frac{1}{2}$  Rockford plain.  
No. 1 $\frac{1}{2}$  Brown & Sharpe.  
No. 1 Knight vertical.  
No. 3 Oesterlein plain.

No. 3 Cincinnati plain.  
No. 4 Cincinnati plain.  
No. 12 Kemp Smith.

#### GRINDERS.

Schmidt auto. cylinder.  
5"x18" Ott.  
No. 1 Fraser, surface.  
30"x84" Diamond, face.  
No. 60 Heald, cylinder.

No. 50 Gardner, disc.  
No. 16 Brown & Sharpe, plain.  
8" Heald rotary, magnetic chuck.  
Washburn twist drill grinder.

#### MISCELLANEOUS.

Acetylene generator, 100 cu. ft. cap.  
Air compressors, (10).  
Belt lacer, Peerless.  
Bolt cutter, 1" Landis.  
Bolt cutter, 2" Standard.  
Boring mche., hor., No. 2 P. & H.  
Bulldozer, 75-ton Lurie hydraulic.  
Gear hobber, No. 1 Schuchart & S.  
Gear hobber, No. 1 Farwell-Adams.  
Hammer, No. 2-A high speed.  
Keyseater, No. 2 Mitts & Merrill.  
Pipe machine, 16" Bignall & Keeler.  
Post hammer, Pettingell.  
Punch, No. 3 Long & A., 5" throat.

Punch, No. 7 Long & A., 4" throat.  
Riveter, model A, Shuster 7".  
Screw machine, 3"x36" Jones & L.  
Screw machine, 2"x24" Jones & L.  
Screw mche., 1 $\frac{1}{2}$ " Smurr & Kamien.  
Squaring shear, 62", 18" gap, No. 10 gauge.  
Tapping machine, No. 1 Garvin.  
Tilted turret lathes, Nos. 2, 3 & 4 Wood.  
Turret lathe, Libby 20".  
Turret machine, 24" Greenlee.  
Wheel press, 90", 600-ton.  
Wheel press, 66", 300-ton.

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## SECOND-HAND MACHINERY

### FOR SALE BY

**Louis E. Rechtin & Bro.,**

**215 Butler St., Cincinnati, O.**

Die press, Bliss, with fly wheel, foot treadle.....	\$ 50.
Electric generator, d. c., 75 k. w., propelled by 100 h. p. engine.....	800.
Grinder, water tool, with 17x2" emery wheel.....	35.
Punch and shear, Niagara No. 122-A.....	25.
Toggle joint press, Perkins, takes 25x54", hand power.....	300.
Welding outfit, Oswold, large size, with 8 guns and other fixtures.....	350.
All of the above mentioned machines are odd with us and out of our line, therefore are priced low.	

### FOR SALE BY

**A. M. Stoehr Machinery Co.,**

**560 W. Adams St., Chicago, Ill.**

Bolt cutters, 3 & 6-spindle Acme.  
 Boring mills, 42" Bausch; 54 & 60"  
 Niles; all have 2 heads; and others.  
 Compressors, 12 different sizes.  
 Drill presses, single spdl., L. & G.;  
 2-spindle H. & W.; 4-spdl. Foote-  
 Burt; 4-spdl. Barnes; 22" Rockford.  
 Gear hobbors, cutters; No. 12 Barber-  
 C., 48" & 60" G. & E.; 36" Fellows  
 gear shaper, and others.  
 Grinders, No. 3 LaSalle plain and  
 surface; 3x18" Norton, and others.  
 Lathes, 18x8 Barnes, hvy. duty; 19x8  
 LeBlond, q. c. g.; 16x8 Flather; 15  
 & 24 spinning, and others.  
 Milling mchs., No. 25 Becker plain;  
 No. 6 Whitney; No. 0 Rockford pl.;  
 No. 3 Thurston dieing, & others.  
 Oil extractors, centrifugal, (8).

Pipe machines, 6" Jarecki.  
 Punch presses, No. 16 Bliss horning;  
 and others.  
 Punch & shears, No. 3 Long & A.,  
 d. c., 1" thru 1 1/2"; No. 14 1/2 W., d. c.,  
 15" throat. No. 1-C New Doty,  
 and others.  
 Riveters, No. 4-A & No. 5-A High  
 Speed; No. 1 Townsend; No. 1  
 L. & A., 1" capacity; and others.  
 Saws, 9x9 Sterling high speed; 12"  
 band, and eight others.  
 Screw machines, Nos. 2 & 3 Foster  
 (12); Nos. 52 & 53 Acme, others  
 plain and automatic.  
 Shears, Rock River alligator, 1 1/2".  
 Tapper, R. & S., 1" capacity.  
 Welders, both spot and butt.  
 Wire straightening machines, (5).

### FOR SALE BY

**Scott-Bansbach Machinery Co.,**

**130 S. Clinton St., Chicago, Ill.**

Automatics, 2 1/2" Gridley mult.  
 spindle, with good deal of  
 equipment, good condition,  
 (2), each.....\$1,000.  
 Automatics, 2 1/2" Gridley single  
 spindle, with some equip-  
 ment, good cond., (2), each..... 200.  
 Drill presses, No. 310 Baker  
 heavy duty, (5), each..... 325.  
 Drill presses, 26" Aurora, slid-  
 ing hd., power fd., (2), each..... 250.  
 Header (bolt), 1/2" Acme..... 500.  
 Header, 1/2" National Mch. Co.,..... 750.  
 Lathe, 16x8 Prentice, q. c., all  
 g. h., s. p. d., with chuck..... 800.  
 Lathe, 30"x24" Lodge & S.,  
 patent head, motor driven,  
 with 10 h. p., d. c., 220 volt  
 direct connected motor, com-  
 plete with chuck..... 1,250.  
 Press, geared, No. 8, style M.,  
 Americ'n Can, 3" str., 25,000  
 lbs., with side shear..... 2,000.  
 Punch, No. 15 W.-W., sgl. end,  
 cap. 1 1/2"x1 1/2", 12" throat..... 600.

Maxi-mill, 61" Bullard, with  
 cutting lubricant system, 2  
 hds., rapid power traverse in  
 all directions, sgl. pulley dr.;  
 arranged for motor, but with-  
 out motor (10 h.p. required);  
 available June 15, 1928.....\$4,500.  
 Punch, No. 14 W.-W., dbl. end,  
 cap. 1 1/2", 10" throat..... 1,000.  
 Screw machines, No. 00 B. & S.  
 full auto., standard equip-  
 ment, with slotting attach.;  
 guaranteed condition, (4), ea..... 500.  
 Screw mchs., No. 19 B. & S.  
 full auto., standard equip.,  
 guaranteed condition, (7), ea..... 550.  
 Shaper, 26" (no name), b. g.  
 crk., hvy. duty, in operation..... 750.  
 Shear, alligator, 3" cap., low  
 knife type..... 350.  
 Turret lathe, No. 3 Warner &  
 Swasey; plain machine, ex-  
 cellent condition..... 200.  
 Turret lathe, 21" Gisholt, com-  
 plete with chuck and equip-  
 ment; good condition..... 500.

## SECOND-HAND MACHINERY

### FOR SALE BY

**Edward L. Klauber,**

**320 South Third St., St. Louis, Mo.**

Bolt cutter, Little Giant, 1" cap.  
Bolt cutter, National, 8" cap.  
Bolt cutter, National, 31" cap.  
Bolt cutter, Landis, 2" cap.  
Die head, Landis, cap. 2".  
Drill press, 34", b. g., s. h., t. a.  
Drill press, 24" Aurora, b. g., s. h.  
Grinder, No. 2 Cincinnati univ. 12x36.  
Grinder, No. 1 Cincinnati cutter & tool.  
Grinder, B. & S. No. 3 cut. & reamer.  
Grinder, No. 11 Brown & S. plain.  
Grinder, No. 10 Besly disc, ring wh.

Lathe, 14"x6" Monarch, d.b.g., q.c.g.  
Lathe, 16"x8" Monarch, d.b.g., q.c.g.  
Lathe, 16"x8" South Bend, plain chge.  
Lathe, 16"x8" Lodge S., q.c.g., d.b.g.  
Lathe, 21"x8" LeBlond, q.c.g., d.b.g.  
Miller, No. 2 LeBlond universal.  
Planer, American 30"x30"x8".  
Punch press, No. 2 Toledo, o. b. i.  
Punch press, No. 2 Rockford, o. b. i.  
Punch press, No. 3 Toledo, o. b. i.  
Roll, Hilles & Jones, 8"x1" cap.  
Shaper, 20" Smith & Mills, b. g.

### FOR SALE BY

**McDonald Machinery Co.,**

**1531-33 N. Broadway, St. Louis, Mo.**

Clock, electric time system.  
Demagnetizer, Walker.  
Drills, Leland-Giff'd 2-3 sp., h.s., b.b.  
Drill, Detroit 5-spindle horizontal.  
Drill, Gardam 12-spdl. adjustable.  
Drills, Demco, H. & W., Kokomo 1-spdl., Sipp 2-spdl., h. s., b. b.  
Drills, 20", 24", 34" b. g., & tapping.  
Furnace, Holcroft 92 k.w. annealing.  
Grinders, P. & W. 14" vertical surface; 4 Ott 5"x18"; Landis 12"x18".  
Hack saw, 4x4, 6x6 and 8x8 h. s.  
Lathes, Davis 22"x10", Bridgeford 27x9, Walcott 18x8, q. c.  
Milling machines, Kempsmith No. 2; Ohio No. 20 plain; 1-Knight vert. mill & drill; Becker "SD" vertical, rotary table, 17200 lbs.; Cincinnati No. 3 plain; American No. 12 universal; Cincinnati No. 2 universal.

Pipe mche., Jarecki 6", dies & cut-off.  
Planers, Pond 42"x42"x16", 2 heads.  
Punch presses, Bliss No. 2, double crank; Rockford No. 3, o. b. i.; Bliss Nos. 10 & 20.  
Punches, Felber 1" in 1", and slitt. shear; Scully, 20" throat, 1" in 1".  
Screw machine, Gridley 1-spdl. 24" auto.; Cleveland 1 1/2" auto.; P. & W. No. 24 hand; Foster No. 3 hand; Woods No. 2 tilted turret head.  
Shapers, 26" open side planing; 15" Smith & Mills; 15" Kelly; 16" Milwaukee; 7" Rhodes; 24" Walcott; 16" Steptoe.  
Shears, 60" thrt. rotary slitting, (2).  
Tapping machines, Garvin Nos. 1 & 2 automatic.  
Welders, 20 k. w. spot. Toledo, (2).  
Welders, butt, Federal, 1/4" rds.

### FOR SALE BY

**J. L. Lucas & Son, Inc.,**

**3 Fox St., Bridgeport, Conn.**

#### HAMMERS.

Each to be rebuilt. Offered to you under our regular guarantee.

600 lb. Billings & Spencer board lift, mod. D.	\$750.
600 lb. Bliss board lift, 4 poppet type, (2)	750.
50 lb. Farrel rope drop, 4 poppet type	50.
80 lb. Farrel rope drop	80.
80 lb. Farrel belt lift, 4 poppet type	100.
90 lb. Farrel belt lift, 4 poppet type	90.
100 lb. Farrel drop hammer, 4 poppet type	100.
175 lb. Bliss belt lift, 4 poppet type	200.
450 lb. Toledo rope lift drop	400.
No. 6 Miner & Peck automatic drop lifter	350.
60 lb. Bradley Cushioned helve hammers, (3)	450.
80 lb. Bradley cushioned helve hammers with round adjustable anvil	675.
150 lb. Lingle upright helve hammer	390.
Size "B" Rochester helve hammer	150.
12" Bliss 4 poppet strap lift	225.
24" Bliss 4 poppet strap lift	225.
15 lb. Bradley upright strap hammer	125.
100 lb. Scranton upright spring strap	275.
100 lb. Bradley upright strap	425.
100 lb. Bradley compact	375.



## SECOND-HAND MACHINERY

### FOR SALE BY

**Merkle-Korff Gear Co.,** - **213 N. Morgan St., Chicago, Ill.**

Gear generators, 15" Gleason spiral bevel, (4), each.....	83,250.
Lathes, 14" Lodge & S. tool room, dbl. back gear, taper att., (2), each..	550.
Milling machine, LeBlond No. 2½ plain.....	550.
Milling machine, Steptoe.....	250.
Screw machines, No. 10 Foster, power id. tur. and cross-slide, (2), each	750.
Straight tooth generators, 18" Gleason, (2), each.....	550.

These machines are under belt and are as good as new.

### FOR SALE BY

**Taylor-Hall Welding Corporation,** **5 May St., Worcester, Mass.**

#### SPOT AND BUTT WELDERS.

We offer rebuilt and fully guaranteed spot and butt welders as listed below:

- One No. 0 Toledo butt welder, capacity ½" round stock.
- One No. 1-A Thomson butt welder, capacity ½" round stock.
- One No. 2-A Thomson butt welder, capacity ½" round stock.
- One No. 3 Thomson butt welder, capacity ½" round stock or flats 2"x½".
- One No. 10-A-6 Thomson butt welder, capacity ½" round.
- One No. 20-A-10 Thomson butt welder, cap. 1½" round solid or 2" round pipe.
- One No. 10-B Toledo butt welder, capacity 1½" round or 2½" pipe.
- One No. 40-A-2 Thomson butt welder, capacity 2" round solid stock.
- Two No. 110 Thomson spot welders, 5 k. w.
- Two No. 140 Toledo spot welders, 20 k. w.
- One No. 240 Thomson spot welder, 20 k. w.
- One Thomson electric riveter for rivets ½"x¼" long to ½"x3" long.
- One Thomson No. 21 automatic butt welder. This can weld 1,000 3/16" barrel hoops per hour, other work at similar speed.

Every machine demonstrated and fully guaranteed before selling.

Offered for immediate delivery and subject to prior sale.

#### WANTED TO BUY—WELDERS.

We will buy any type Thomson or Toledo spot or butt electric welder in any condition. Please give serial number, type number, voltage and condition

when writing.

### FOR SALE BY

**D. C. Oviatt & Co.,** - **2170 Lakeside Ave., Cleveland, O.**  
**PRESSES.**

Bliss Nos. 1½ & 3½B, toggle.	Toledo No. 666 knuckle joint.
Bliss No. 2 double crank.	Toledo 35-P flywheel press.
Bliss "Stiles" Nos. 3 & 4.	Toledo 36-P geared press.
Bliss 60½ rack and pinion.	Toledo No. 76 flywheel.
Bliss 68-C & 68-N double action.	Toledo 54 & 55½, straight side.
Bliss 73½, 73½, 74½ & 75½.	Ferracute D-66 s. s. reducing.
Consolidated No. 56 trimming.	Michigan No. 5 inclinable flywheel.
Consolidated No. 65 grd., straight s.	Niagara No. 4½ inclinable, flywheel.
Consolidated No. 165 dbl. crank.	

#### MISCELLANEOUS.

Automatics, Gridley 7", 1½", 1½".	Shears, Bertach 8', 21" thrt., 3/16".
Bulldozers, W. & W. 2, 4, 6, 30.	Shear, alligator, Canton No. 5.
Drills, Colburn D-1, D-2, D-3.	Shear, alligator, Hiles-Jones No. 2.
Forging machine, 4" Acme.	Shear, Niagara 416-C slitting.
Gear cutter, No. 3 B. & S. 26".	Shear, Toledo 36"x18 ga. power.
Gear cutter, No. 3 B. & S. 36".	Tumbling barrels, 18"x30"x45".
Grinder, Pratt & Whitney 14".	Turret lathes, W. & S. 4 and 6.
Rivet hammers, 2-A, 3-A, 4-A & 5A.	Turret lathes, Libby 18".
Rolls, Bertach 10', capacity ½".	Turret lathes, Acme 3½"x36".
Saws, Ryerson friction No. 3.	Welder, Winfield, cap. 2 pcs. 3/16".
Screw slotter, No. 2 W-F., cap. ½"x3".	Welder, Federal No. 10-A butt.
Seamer, dbl., No. 22 Max Ams irreg.	

Over 400 Machine Tools in stock. Send us your inquiries.

# ReMANUFACTURED - (ORIGINATED BY US) - MACHINE TOOLS

REG. U. S. PAT. OFF.

Largest stock of high grade machine tools in America. All principal makes and models. Every one guaranteed. Save 25 to 60 per cent on prices.

This is only a partial list. Write for price on any tool you need, whether listed below or not.

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### LATHES

- 14—20"x 8' LeBlond.
- 5—20"x12' American.
- 5—20"x16' American.
- 20—21"x10' LeBlond.
- 10—24"x11' Cisco.
- 1—24"x12' Reed Prentice Grd. Hd.
- 1—24"x15' Chard.
- 7—25"x10' LeBlond.
- 10—25"x12' LeBlond.
- 24—26"x10' Canada.
- 10—26"x18' Bridgeford.
- 2—30"x34"x20' American.
- 18—32"x12' Pittsburgh.
- 1—36"x36' Putnam geared head.
- 4—36"x30' Pittsburgh Geared Hd.
- 3—36"x37' Niles Bement Pond.
- 1—51"x20' LeBlond.
- 1—56"x64"x18' Johnston.

### MILLERS

- 1—No. 2 Kempsmith.
- 1—No. 25 Bilton.
- 2—No. 2 Rockford.
- 2—No. 28 Ohio.
- 6—No. 2-B Hvy. Brown & Sharpe.
- 4—No. 3 Kempsmith.
- 9—No. 3-B Hvy. Brown & Sharpe.
- 2—No. 4 Cincinnati.
- 2—No. 4 LeBlond.
- 3—No. 4-B Becker.
- 2—No. 3 Cincinnati Vertical.
- 2—No. 4 Cincinnati Vertical.
- 4—No. 5-C Becker.

### PLANERS

- 1—24"x24"x 6 American.
- 2—36"x36"x10' Bickett.
- 1—36"x36"x12' Woodward & P.
- 3—36"x36"x18' Cincinnati.
- 2—42"x42"x18' Rockford.
- 1—72"x56"x36' Cincinnati.

### PRESSES

- 2—No. 56 Ferracute.
- 1—No. 69 Stoll Geared.

### BORING MILLS—Vertical

- 1—24" Bullard "New Era."
- 1—42" Gisholt.
- 1—52" Gisholt.
- 1—53" Niles-Bement-Pond.
- 1—60" Pittsburgh.
- 1—62" King.
- 2—72" Cincinnati.
- 7—72" Gisholt.

### BORING MILLS—Horizontal

- 1—3" Foote-Burt.
- 6—Rockford.
- 1—No. 1½ Giddings & Lewis.
- 1—No. 3 Rochester Floor Borer.
- 1—5" Detrich & Harvey Floor Bor.

### DRILL PRESSES

- 25—Class K Henry & Wright.
- 2—20" Barnes all geared.
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- 1—No. 24 Foote-Burt.
- 1—No. 310 Baker.
- 1—No. 513 Baker.

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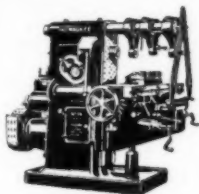
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Every machine has been completely disassembled, re-scraped, and new parts put in wherever necessary. A K&T rebuilt is thoroughly tested and carries the same accuracy guarantee as a new machine.

1B Plain	Double Overarm
1B Plain	Single Overarm
1½A Mfg.	Single Overarm
2BS Plain	Double Overarm
2A Mfg.	Double Overarm
2B Plain	Double Overarm
2B Plain	Single Overarm
3B Plain	Single Overarm
3B Plain	Double Overarm
3B Universal	Double Overarm
4B Plain	Double Overarm
2B Vertical	
3B Vertical	
4B Vertical	

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K & T Factory rebuilt milling machines are sold only through our authorized dealers or branches.

**Address: Rebuilding Department**

**MILWAUKEE MILLING MACHINES**  
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**CORPORATION**

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# Must Vacate Our Warehouse — Attractive Prices To Move Stock

<b>BORING MILLS:</b>	30" Warner & Swasey Vert., table 29" dia.....	\$200.
	36" x 48" Bridgeport Extension, 1 swivel head...	325.
	51" Baush, 2 heads .....	550.
<b>GRINDERS:</b>	Webster & Perks D. E. Heavy Foundry Type, takes wheels 24" x 4" .....	\$ 50.
<b>LATHES:</b>	14" x 6' Blaisdell .....	\$ 75.
	16" x 6' Blaisdell .....	125.
	21" x 12' Johnson, hollow spindle, taper attach...	275.
	24" x 12' Schumacher-Boye .....	550.
	24" x 14' Rahn-Mayer Corp. ....	650.
	24" x 16' 6" Johnson, solid spindle .....	350.
	26" x 10' 6" Walcott Hvy. Duty Q.C.G., 7, ea.	650.
	27" x 12' Pittsburgh .....	650.
	24" x 6' Gisholt Turret, 6 1/4" hol. spdl., 2, ea.	950.
	3" x 36" Jones & Lamson Flat Turret .....	950.
	2 1/4" x 24" Jones & Lamson Flat Turret .....	850.
<b>MILLING MCHE.:</b>	No. 3 Cincinnati Plain, table 12" x 3' 11", as is...	\$250.
<b>PRESSES:</b>	Double Cam Action, 4" stroke .....	\$150.
	Double Acting Drawing, 3 1/4" stroke .....	175.
<b>SHEARS:</b>	Waterbury-Farrell Rotary Shear, about 16 ga...	\$ 45.
	Doelger-Kirsten High Knife Alligator, 3 1/4" cap.	1500.
	Canton No. 5 High Knife Alligator, 3" cap.....	1250.
<b>HAMMERS:</b>	25 lb. Bradley Cushioned Helve .....	\$140.
	40 lb. Bradley Cushioned Helve .....	175.
	800 lb. Bement Single Frame Steam Forging...	475.
	2000 lb. Bement-Miles Steam Drop .....	475.
<b>MISCELLANEOUS:</b>	Forge, No. 41 Champion, hearth 32" x 45" .....	\$ 35.
	Gear Cutter, B. & S. No. 13 .....	350.
	Gear Blank Castings, C. I., also face plate and drill press table, lots of 200 lbs.....	6.
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	Pipe Folder, 32" hand power for 24 gauge .....	25.
	Pipe Machine, Eaton-Cole-Burnham 1" to 4" ..	225.
	Pipe Machine, Eaton-Cole-Burnham 2 1/2 to 8" ..	450.
	Salamander for Coke heating, inside dimensions 22" x 22" x 24", 38" high. Good as new...	15.
	Saw, Gliem Cold, 22" dia., cap. 6" rd.....	150.
	Shaper, 20" Gould & Eberhardt .....	375.
	Shaper, 20" Steptoe .....	325.
	Shaper, 16" Springfield .....	225.
	Slotter, 10" Bruckton .....	175.
	Swaging Machine, Excelsior, cap 3/16" .....	75.

## RUSSELL MACHINE COMPANY

1447 Oliver Building,

PITTSBURGH, PA.

## NEW 3 PHASE MOTORS CHEAP. 3 H. P. \$57.50; 5 H. P. \$67.50

### LATHES

12"x 5' Cleveland, geared head.  
14"x 6' Carroll-Jamieson, new.  
14"x 6' Hamilton, grd. hd., motor dr.  
14"x 6' Monarch, quick change.  
14"x 6' Von Wyck, quick change gear, taper attachment.  
14"x 8' Sidney, double back geared.  
16"x 6' Hamilton, style H.

16"x 8' Sidney, double back geared.  
18"x 10' American, quick change.  
20"x 10' Hamilton, rapid production.  
20"x 10' Monarch, taper attachment.  
24"x 24' Prentice, with raising block.  
25"x 12' Sidney heavy duty.  
28"x 8' Bridgeford, heavy duty.  
8x60" & 10x72" Fitchburg Lo-Swing.

**TURRET LATHES and SCREW MACHINES**  
No. 4 Defiance hand screw machine.  
No. 4 Woods Tilted Turret, (2).  
1 1/2" Milholland.  
2x24 and 3x36 J. & L.

No. 3-B Foster, 5" capacity, new.  
Warner & Swasey No. 2.  
Warner & Swasey No. 4.  
Nos. 52 & 56 National Acme auto.

### SHAPERS

14" Niles, traveling head.  
14" Steptoe, crank.  
16" American, tool room.

16" American b. g. crank.  
16" O. & S. b. g. crank, new.  
24" O. & S. back geared crank.

**The Entire Plant of the Columbus Machine Company. Ask for List.**

### PRESSES

No. 3-A Willard-A inclinable.  
No. 1 Toledo inclinable.  
Nos. 1 1/2, 2, 2 1/2 & 4 Robinson.

Emco, bench, for radio parts.  
No. 35 Niagara straight side.  
Perkins, dbl. housing, wt. 4,000 lbs.

### DRILLS and RADIALS

3' Cinti-Bickford, agl. pul., gear box.  
3 1/2' Silver, agl. pulley, gear box dr.  
4' Universal Radial Drill Co. plain.  
Electric drills, Black & Decker.

22", 24", 26", 28" and 32", sliding hd.  
20"-24" & 26" Barnes, all geared.  
4-spindle Reed sensitive.  
Electric drills, Thor, all sizes.

### MILLING MACHINES

No. 1 Kempsmith universal.  
No. 2 Kempsmith universal.  
No. 2 Kempsmith plain.  
No. 25 Becker plain, power feed.  
No. 3 Kempsmith univ. and plain.

No. 3 LeBlond, with vertical attach.  
No. 2 H Brown & Sharpe plain.  
Briggs type "A" high duty, 24x8 table.  
No. 7 Becker Lincoln type.  
Oesterlein 24x7 1/2 x 18 plain.

### GRINDERS

Nos. 1 & 78 W. & M. surface.  
No. 2 W. & P. 10x30 universal.  
6"x 15" Fitchburg plain.  
12x36 Cincinnati universal.  
12x42" & 16"x 30" Landis plain.  
36" and 66" Yates plate.  
Perfection cylinder.

No. 60 Heald cylinder.  
Schmitt cylinder grinder.  
No. 3 Ohio universal & tool.  
No. 4 Gardner 20" double disc.  
No. 20 Bryant, chucking.  
Capital internal, new, 2" x 2".

### MISCELLANEOUS

Band saw, metal, Klemm.  
Band saws, Napier 4"x 4", 10"x 10".  
Bending rolls, 7" for 1/2" plate.  
Boring mill, Colburn No. 3, tur. hd.  
Boring mill, 54" & 60" Colburn, 2 hds.  
Brake, 10", 18-gauge metal.  
Broaching machine, No. 1 LaPointe.  
Broaching machine, No. 3 LaPointe.  
Compressors, 6x6, 8x8 and 12x10.  
Drawing tables, adjust., 42"x 66" top.  
Gear cutter, 26" No. 3 B. & S.  
Gear millers, Bilton No. 1, (5).  
Hammer, 40 lb. Bradley, helve.  
Hammer, 150 lb. Standard drop.

Oil separator, Springfield.  
Pipe machines, 2", 4" & 6".  
Pumps, Gould triplex, 6 1/2"x 8" & 7x8".  
Punch & shear 1/2" by 1/2", 10" throat.  
Riveting hammers, type B, Nos. 2, 3, 4 & 5-A.  
Scale, 1500 lb. Toledo, dial type.  
Scleroscope, Shore.  
Shear, No. 296 Robinson, 14 ga., 5' shear, No. 362 Robinson.  
Shear, No. 20 Quickwork, 30" throat.  
Shear, circular, Pettingell 60".  
Tapping machine, Acme 6-spindle.  
Threading mche., W. & P. 2-spindle.

**THE OSBORNE & SEXTON**  
**MACHINERY COMPANY**  
COLUMBUS OHIO

DEPT. H.

105

# For Real Values— Come To Eastern

## MILLING MACHINES

- No. 2 HIGH POWER CINCINNATI UNIVERSAL, single pulley, comp.
- No. 3 OHIO UNIVERSAL, cone pulley, complete.
- No. 1 Cincinnati UNIVERSAL, cone pulley, complete, old style.
- No. 3-B Heavy Brown & Sharpe Plain Miller, single pulley.
- No. 3 Cincinnati HIGH POWER PLAIN, single pulley.
- No. 3 Cincinnati Plain Milling Machine, cone pulley.
- No. 2-B OHIO Plain Milling Machine, cone pulley.
- No. 2 Cincinnati Plain Milling Machine, cone pulley.
- No. 1 Rockford Plain Milling Machine, cone pulley.
- No. 0 Cincinnati Plain Milling Machine, cone pulley.
- No. 6 Becker Vertical Milling Machine, cone pulley.
- No. 5 Becker Vertical Milling Machine, cone pulley.
- No. 1 U. S. Hand Milling Machine, cone pulley.

## SHAPERS AND PLANERS

- 24" John Steptoe Heavy Duty Back Geared Crank Shaper, cone pulley.
- 30" Columbia Heavy Duty Back Geared Crank Shaper, cone pulley.
- 14" John Steptoe Plain Crank Shaper, cone pulley.
- 38"x38"x18" Niles Tool Works Planer, belt drive, with two heads on rail.
- 30"x30"x 8' G. A. Gray Planer, belt drive, with one head on rail.
- 26"x26"x 8' American Tool Works, Planer, belt drive, with one hd. on rail.

## RADIAL AND UPRIGHT DRILLS

- 34" American Tool Works Triple Purpose Pl. Radial, speed box dr.
- 3' Bickford Plain Radial, speed box.
- 3' American Tool Works, Plain Radial, cone pulley, belt drive.
- 28" W.F. & John Barnes Upright, t.a.
- 26" Cinti-Bickford Upright, tap. att.
- 24" Aurora Upright Drill Press.
- 23" Rockford upright Drill Press.
- 22" W. F. & J. Barnes Upright.
- 20" W. F. & J. Barnes Upright.
- 2-spindle Henry & Wright High-Speed Ball Bearing No. 2-B.
- Avey High Sp. Ball Bearing No. 1½

## LATHES

- 36"x18" Putnam, t. g., semi q. c.
- 30"x12" LeBlond heavy duty, q. c. g.
- 24"x10" Boye & Emmes, q. c. g.
- 22"x12" Rahn & Larmon, q. c. g.
- 20"x10" Bradford, quick change gear.
- 18"x11" Chard semi q. c. g.
- 16"x 8" Lodge & Shipley, q. c. g.
- 16"x6" Hendey quick change gear, tie bar and taper.

## TURRET LATHES AND SCREW MACHINES

- 24"x26" Pratt & Whitney Flat Head Turret, geared head.
- 2" Pratt & Whitney Turret Lathe, friction head, cone pulley, all feeds.
- No. 6 Warner & Swasey Turret Lathe, friction head, cone pulley.
- No. 4 Brown & Sharpe Wire Feed Screw Machine, friction hd., cone pulley.
- No. 1 Brown & Sharpe Wire Feed Screw Machine, plain head, cone pulley.

## GRINDERS

- No. 60 Heald Machine Co's Cylinder Grinder, late type, complete.
- No. 70 Heald Internal Grinder, belt drive, complete.
- Nos. 1 and 3 Brown & Sharpe Universal Cylindrical Grinders, belt drive.
- 6"x32" Norton Plain Cylindrical Grinder, belt drive.
- No. 2 Oakley Universal Tool & Cutter Grinder, complete.
- No. 1 Wilmarth & Morman Universal Tool & Cutter Grinder, complete.
- NEW YANKEE Twist Drill Grinders.

*This List is Continued on Next Page*

**EASTERN MACHINERY CO.**  
No. 412 East Pearl St., Cincinnati, Ohio

## Continued from Preceding Page

### GEAR CUTTERS AND HOBBERS

No. 4—36" Brown & Sharpe Automatic Spur Gear Cutter.

24" Gould & Eberhard Automatic Spur Gear Cutter.

No. 12 Brown & Sharpe Auto. Spur and Bevel Gear Cutter, gears up to 12".

No. 12 Barber Colman Gear Hobbers.

### MISCELLANEOUS

Arbor Presses, Nos. 2 & 4 Greenerd.

Air compressor, 8" x 8" Ingersoll-Rand class N-E-1, belt drive.

Air compressor, 16" x 14" Chicago

Pneumatic, class N. S. B., belt

dr., or motor dr. with one 150 h. p.

General Electric 3 phase motor.

Bending rolls, power, drop end type,

Bertsch, 48" bet. housings.

Bolt threading machine, 1" Landis,

with lead screw attachment.

Boring mill, 34" Colburn vertical,

with turret head on rail.

Broaching machine, No. 3 LaPointe

(Hudson).

Cold saw, No. 12 Higley, belt drive.

Die slotter, Garvin, belt drive, 12" rotary table.

Keyseater, No. 2 Davis, belt drive, capacity up to 8" keyways.

Press, No. 2 Michigan, o. b. i., power, fly wheel drive.

Press, No. 8 Jas. Lefler, o. b. i., power, fly wheel drive.

Riveting Hammers, Nos. 3 & 4-A High Speed.

Rivet Spinning Machine, 5/16" Grant Noiseless.

Tapping mche., No. 2 Garvin, auto. vertical, cone pulley.

Welder, electric spot, Winfield, to weld 2 pcs. 1/2" material.

*And many others. Send for our complete list*

## EASTERN MACHINERY CO.

No. 412 East Pearl St., Cincinnati, Ohio

All the above carried in our Stock in Cincinnati

## MACHINE TOOLS NEW AND USED

### Prices Warrant Your Attention

14" x 8" American Lathes, q. c. g.

18" x 8" LeBlond Lathes.

34" x 60" Lo-Swing Lathe, 2 carr.

3" x 36" J. & L. 2-Sp. Tur. Lathes.

4" Gridley 4-Sp. Automatics.

24" Gridley 4-sp. Automatic.

8" - 3" Cleveland Automatic,

Model "A".

3" American Sensitive Radial

Drill, tapping attachment.

No. 120 Gardner Disc Grinder.

No. 10-18" Besly Disc Grinder.

No. 2 Pratt & Whitney Plain

Head Miller.

4" P. & W. Spline Miller.

No. 25 Becker Plain Millers.

Wisconsin Hand Millers.

10" Becker 3-sp. Index Centers.

14" Becker Plain Index Centers.

No. 4 I Nazel Hammer, m. d.,

10 h. p. motor.

No. 6 Fellows Gear Shapers.

12" Ingle Tooth Rounder.

No. 2 Rockford b. b. Bal. Tools.

8" Reid Univ. Angle Fixtures.

### MOTORS

1-1 h. p. 220 v., d. c., 1200 r. p. m.

5-10 h. p. 220 v., d. c., 650 r. p. m.

4-15 h. p. 220 v., d. c., 350 r. p. m.

5-20 h. p. 220 v., d. c., 850 r. p. m.

Miscellaneous tools, such as cutters, drills, reamers, magic chucks, emery wheels up to 26" dia., 3" face.

**BARBOUR, LOVE & WOODWARD, Inc.**

Grand Central Terminal Bldg.,

NEW YORK CITY

**MOTCH AND  
THE MERRYWEATHER  
MACHINERY CO**  
**CLEVELAND**  
**DETROIT CINCINNATI**  
**PITTSBURGH**

## Machines of Quality

Several hundred used machines are stocked in our Cleveland warehouse.

Connected with this is a model machine shop devoted exclusively to rebuilding these machines.

Let us send you one of our circulars describing our methods, listing our stock and picturing our plant.

Upon receipt of your address we will forward these circulars periodically.



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**PLANERS:** Niles-Bement-Pond latest electric reversing drive, four heads, box type tables, some with all steel gearing, rapid traverse, some brand new. All guaranteed. Complete in every way.

36" x 36" x 14'

42" x 42" x 30'

36" x 36" x 16'

48" x 48" x 16'

36" x 36" x 26'

50" x 36" x 22'

42" x 42" x 26'

54" x 54" x 22'

**NEW LATHES:** Niles-Bement-Pond, 36"x16' heavy duty, quick change, screw cutting, triple geared, belt drive, at big reduction.

**MILLING MACHINE:** No. 3-B Heavy Brown & Sharpe plain, all geared head, motor drive, with motor.

**MILLING MACHINE:** No. 2-B Heavy Brown & Sharpe plain, all geared head, motor drive, with motor.

**GEAR CUTTERS:** (2) No. 4 Brown & Sharpe Automatic Gear Cutters, for spur gears.

**BORING MILL:** 60" Baush, heavy quick change, geared feeds, table 54" diam., 8" thick, D. C. motor drive, with push button starter.

**LOCOMOTIVE CRANE:** 15-ton Brown Hoist, 50' boom, with 42" magnet and generator.

*For prices and detailed description,  
write either*

**A. F. STRAFER or N. C. FAILOR, Inc.**  
30 Church Street,                      30 Church Street,  
NEW YORK                              NEW YORK

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# Opportunity Knocks Again For the Conservative Buyer

## Real Values in Machine Tools—

### Planers

72"x54"x24' Pond, 4 heads.  
72"x72"x18' Betts, 4 heads.  
36"x36"x24' Pond, 4 heads.  
36"x36"x12' Woodward & P., 3 hds.  
36"x36"x 8' Dietrick & H., openside.  
26"x26"x 8' Pease.

### Boring Mills

96" Niles, 2 heads.  
2—54" Bullard Maxi.  
2—42" King.  
2—Blomquist & E., horiz., 3¼" bars.

### Hammers

5000 lb. Chambersburg.  
4000 lb. Chambersburg.  
4000 lb. Massillon.  
3500 lb. Massillon.  
2500 lb. Massillon.  
2—800 lb. Waterbury Farrell board.  
2—600 lb. Waterbury.

### Grinders

10x50 Norton plain.  
8x36 Fitchburg.  
16x48 Landis crankshaft.  
No. 2 Brown & Sharpe universal.  
No. 2 Taft Pierce universal.  
Heim's Centerless, motor drive.  
No. 4 Detroit Centerless, motor drive.  
10x30 Webster & Perks universal.

### Screw Machines

3¼" Gridley.  
1¼" Gridley.  
No. 55 National Acme.  
No. 53 National Acme.  
No. 52 National Acme.  
No. 00 Brown & Sharpe.  
No. 0 Brown & Sharpe.  
2" Cleveland Model B, New.  
2" Cleveland Model B.  
3¾" Cleveland Model A.  
2¼" Cleveland Model A.  
No. 20, ¾"—¾" Cleveland Model B.  
No. 6 Warner & Swasey.  
No. 6 Foster.  
24" Gisholt, complete equipment.  
18" Gisholt, complete equipment.

### Lathes

48"x21' Pond, triple grd., motor drive.  
44"x45' Putnam, triple grd., motor dr.  
40"x14' Alliance Geared Head.  
32"x12' No. 3 Pittsb'gh, q.c., h.d., c.dr.  
30"x16' Reed, cone drive.  
30"x28' Pond, triple grd., motor drive.  
24"x16' Whitcomb-Blaisdell, cone dr.  
20"x14' Reed, plain change, cone dr.  
21"x10' Boye & E., qk. ch., cone dr.  
20"x10' Hendey Yoke Head.  
14"x 6' Hendey, t. a., qk. ch. collets.  
14"x 6' Hendey, t. a., draw-in attachment, reliev. attachment.

### Drills

6' Niles Radial.  
5' Bickford, t. a., motor drive.  
36" Aurora, g. f.  
4-spindle Leland-Gifford, ball bearing.  
3-spindle Leland-Gifford, ball bearing.  
12-spindle Baush Drill.  
6-spindle Foote-Burt No. 5 Taper.  
No. 2 Colburn, h. p., (New).  
No. 25 Foote-Burt.  
No. 4 Mueller Radial, s. p.

### Milling Machines

No. 4 LeBlond plain.  
No. 3 Brown & Sharpe plain.  
No. 2 Brown & Sharpe plain.  
Gooley & Edlund slab.  
12" Cincinnati mfg. type.  
84 Pratt & Whitney Thread Miller.  
No. 3 U. S. Hand Millers.  
No. 2—13B Brown & S., plain.  
2 No. 2 Garvin Duplex.  
2M—Potter & Johnston.  
2A—Milwaukee, s. p. drive, plain.

### Miscellaneous

50-ton 60' Span Alliance Crane.  
4½" Acme Bolt Cutter.  
Hendey Centering.  
36" Fellow's Gear Shaper.  
18" Gleason Bevel Gear Generator.  
4-Spindle Moline No. 1 Hole Hog.  
60" Gould & Eberhardt Gear Cutter.  
30" Schuchardt & S. Gear Hobber.  
3" National Bolt Cutter.  
No. 20 Bliss Punch Press.

**The EMPIRE MACHINERY EXCHANGE CO., Inc.**

Offices and Warehouses: 2261 E. 14th St., Cleveland, Ohio

# Something You Rarely See "For Sale":

## McCABE'S "2-in-1" and "All-in-1" Lathes

The reason is because McCABE'S Lathes STAY IN SERVICE! However—here's a rare opportunity that can only be appreciated by those who know exactly what the "All-in-1" and "2-in-1" Lathes accomplish. There are a few used "2-in-1" and "All-in-1" Lathes in our Jersey City warehouse. If you are one of the few who "don't know"—it will pay you—and pay you well—to investigate the possibilities of these lathes. Write, wire, phone or call. We will be more than glad to give the additional information.

---

### J. J. McCABE'S "2-in-1" Double Spindle Lathes

32/54" Swing x 14' Bed.  
26/48" Swing x 12' Bed.

26/48" Swing x 22' Bed.  
26/48" Swing x 28' Bed.

Lathe used three months—like new—36" Swing, 16' bed, 3-step cone, double back geared, Q. C. gears, hollow spindle, compound and steady rests, centers, countershaft and complete equipment.

#### SOME OF OUR "FORMER PATTERN"

Lathes 24/40" and 26/44" Swing. Very low price.

---

#### PLANERS

72"x72"x24' Niles, 4 Heads, Belt Driven.  
48"x48"x14' Pond, 2 Heads.  
48"x48"x15' Sellers, 3 Heads.  
26"x26"x 6' Niles, 1 Head.

#### BORING MILLS

8' Niles, 2 Heads.  
50" Bullard, 2 Heads.  
48" Gisholt, 2 Heads.  
4 3/4" Bar Niles Horizontal.  
4 5/8" Bar Bement Miles Horizontal.  
2 3/4" Bar Bement Miles.

---

80" Swing x 46' Bed, Putnam Lathe. All Steel Gears, Motor Drive.

8' Heavy Bending Rolls.

McCabe "2-in-1" Lathe 22' Bed.

---

## J. J. McCabe Lathe & Machinery Corp'n

SINGER BUILDING - - NEW YORK CITY

# SIMMONS *New and Used* MACHINE TOOLS

ATTRACTIVE PRICES

MONEY BACK GUARANTEE

TESTED BEFORE SHIPMENT

## Automatics

- 2—No. 00 B. & S. turret forming.
- 1—No. 00G B. & S. screw.
- 1—No. 0 B. & S. Cut-off.
- 3—No. 0 B. & S. screw.
- 1—No. 2-G B. & S. screw.
- 5— $\frac{1}{2}$ " Gridley multiple.
- 5— $\frac{3}{4}$ " Gridley, single.
- 4— $\frac{3}{4}$ " Gridley, single.
- 3— $\frac{1}{2}$ " Gridley, single.
- 1— $\frac{3}{4}$ " Cleveland, single.
- 2— $\frac{1}{2}$ " Cleveland, Model A.
- 1— $\frac{3}{4}$ " Cleveland, Model A.
- 1— $\frac{1}{2}$ " x 7" New Britain, bar.

## Shapers

- 1—6" P. & W., vertical.
- 1—14" P. & W., crank.
- 1—15" Hendey, pillar.
- 1—16" Smith Mills, d. b. g.
- 1—16" Whipp, 4-step cone.
- 1—16" G. & E., extension base.
- 1—16" American, motor drive.
- 1—20" Kelly, 4-step cone.
- 1—20" Smith Mills, 4-step cone.
- 1—20" Ohio heavy duty.
- 2—24" G. & E., extension base.
- 3—24" Cincinnati, b. g.
- 1—28" Queen City, cone drive.
- 1—32" Smith Mills, gear box.

## Radial Drills

- 1—24" Mueller, rd. column.
- 1—28" American high speed.
- 1—42" C. O., wall type.
- 1—48" Columbia, rd. column.
- 1—60" Niles semi universal.
- 1—60" American, motor drive.
- 1—72" Cincinnati, Bickford.
- 1—72" Bickford, Universal.
- 1—72" Niles, Universal.
- 1—72" American, rd. column.
- 1—72" Bickford, Plain.
- 1—84" Reed Prentice, Plain.

## Planers

- 1—24x 6 Powell Hi Speed.
- 1—24x 6 Whitcomb second belt.
- 1—24x 6 Rockford, 1 head.
- 1—24x 8 Cincinnati, gear box.
- 2—24x 8 Whitcomb, second belt.
- 4—24x10 Whitcomb second belt.
- 1—24x12 American, 2 heads.
- 1—28x 6 Gray, spur geared.
- 1—28x 6 New Haven, 1 head.
- 1—28x 7 New Haven, 1 head.
- 5—30x30x12 N. - B. - P., reversing motor drive, with control panel.
- 1—30x18 Cincinnati, Tu-Speed.
- 2—36x36x10 N. - B. - P., reversing motor drive, with control panel.
- 1—36x12 N. - B. - P., 4 heads.
- 1—36x16 N. - B. - P., 4 heads.
- 1—36x12 Detrick Harvey.
- 1—36x14 Niles, gear box.
- 1—36x36x20 Woodward - Powell 4 heads reversing motor drive with control panel.
- 1—42x42x26 Pond, reversing motor drive, with control panel.
- 1—60x12 Gleason, 1 head.
- 1—60x14 Powell extra heavy.
- 1—60x60x22 Pond, reversing motor drive, with control panel.

## Turret Lathes

- 6—18" Libby Hi-Power.
- 2— $\frac{1}{2}$ " x  $\frac{1}{4}$ " P. & W.
- 2—7/16x24 P. & W.
- 1—No. 22 Garvin Monitor.
- 1—No. 24 Garvin, G. F. H.
- 2—No. 4 Warner Swasey.
- 1—No. 3 Forster, G. F. H.
- 1—No. 3 Warner Swasey.
- 2—No. 4 Millholland.
- 9—2"x26" P. & W.
- 2—24"x11" Acme.
- 1—54" Bardons & Oliver.
- 2—24"x26" P. & W.
- 1—24" Gisholt, big bore.
- 6—3x36 J. & L.
- 1—32" x 24" Gisholt, M. D.

# Simmons Machine Tool Corp.

NEW YORK

ALBANY

BUFFALO

149 Broadway

1212 Troy Road

88 Exchange St.

# Every Tool a Bargain

This is an exceptionally fine lot of tools,  
90% being nearly new or in excellent condition

## Shapers and Planers

- |  |                                      |
|--|--------------------------------------|
| 24" Kelly heavy duty, bk. grd., 99%.   | 36" Fellows Gear, 90 to 98%, (5).    |
| 21" Averbeck back geared, 90%.         | 32x32x14 Gray Planer, 2 hds., m. dr. |
| 18" Hollingworth h. d., bk. grd., 98%. | 24x24x 6' Pratt & Whitney.           |
| 18" Flather, pr. down feed, 95%.       | 24x24x 6' Putnam, good cond., \$150. |

## Grinding Machines

- |  |                                      |
|--|--------------------------------------|
| 2-14x36 Pratt & W. vert. sur., 85%.          | Nos. 70 & 75 Heald internals, 90%.   |
| 2-12x36 Diamond surface, 90%.                | 8" Heald, s. t., surface, 95%.       |
| 2-6x32 Nortons, 85%.                         | No. 14-12x48 B. & S. plain.          |
| 2-No. 11 B. & S. pl., s. sp. dr., late, 95%. | Nos. 4 & 6 Gardner disk, b. b., 95%. |

A Large Assortment of Tool and Cutter Grinders

## Drilling Machines

- |   |                                      |
|---|--------------------------------------|
| 3 1/2" Dreses Radial, cone dr., t. att. | 3-sp. Henry & W., h. a., b. b., 85%. |
| 36" Reed-Prentiss, s. h., t. a., 95%.   | 4-spindle Allen, ball bearing, 98%.  |
| 28" Superior, s. h., b. g., good cond.  | 4-spindle Barnes 20", mfg., 98%.     |
| 25" Snyder, s. h., 95%, (5).            | 8 sp. Fox multiple, heavy.           |

## Milling Machines

- |  |  |
|--|--|
| No. 3 LeBlond pl., h. d., d. b. g., 90%. | No. 2 Cincinnati Automatic, 90%.         |
| No. 3 B. & S. plain, cone drive, 90%.    | No. 1 Becker universal, (2).             |
| No. 4 Brown & Sharpe univ., 85%.         | 5-B Becker vertical, 85%.                |
| No. 1-V Brown & Sharpe plain.            | No. 6 Becker vertical, 80%.              |
| No. 2 Clevel'd pl., s. a. dr., 95%, (4). | No. 3 Cincinnati vert., s. sp. dr., 90%. |
| No. 2 Oesterlein plain, 85%.             | No. 2 Cincinnati vert., cone dr., 98%.   |
| No. 2 B. & S. cone drive, 90%.           | No. 13 B. & S. mfg., 95%.                |
| No. 2 Becker, Lincoln type, 85%.         | Whitney and U. S. Hand Mill., (10).      |

## Presses

- |   |   |
|---|---|
| No. 21 Bliss o. b. i., 90%.                     | No. 4 1/2" Niagara o. b. i., 95%.       |
| No. 20 1/2" Bliss o. b. i., b. g., m. dr., 98%. | No. 73 Bliss st. s., 20" bet. housings. |
| No. 20 Bliss o. b. i., 95%, (3).                | No. 534 Max Ams, st. side.              |
| No. 19 Bliss o. b. i., 95%, (2).                | Cleveland straight side, 3 1/2-ton.     |
| No. 41 Toledo, 90%, (2).                        | Double crank Cleve., 30" bet. hsgs.     |

A Large Assortment of Smaller Presses

## Lathes

- |   |   |
|---|---|
| 32x22 Draper, l. c. g., triple grd.     | 16x6 Hendey, taper attach., 85%.        |
| 24x12 Boye & Emmes, q. c. g., d. b. g., | 16x8 Hendey, taper attach., 90%.        |
| 75%, raising blocks.                    | 16x8 Bradford, q. c. g., d. b. g., 95%. |
| 21x10 LeBlond heavy duty, 95%.          | 14x8 LeBlond, q. c. g.                  |
| 19x8 LeBlond heavy duty, 95%.           | 14x6 Hendey, taper attach., 70%.        |
| 16x6 LeBlond, q. c. g.                  | Over 100 Other Lathes.                  |

## Screw Machines and Turret Lathes

- |   |  |
|---|--|
| 4-spindle 2 1/2" Gridley Automatic.     | 3x36 2-sp. J. & L., late No., 95%.     |
| 4-spindle 1 1/2" Gridley Automatic.     | No. 7 Bardons & O., late No., (2).     |
| 4-spindle 1 1/2" Gridley Automatic.     | No. 4 Warner & Swasey, (5).            |
| No. 24 New Brit'n Auto., ex. cond. (3). | No. 1 Garvins, like new, (4).          |
| 3 1/2x36 Cin'ti Acme, like new, (2).    | No. 2 Hd. Sc. Mchs., various makes, 12 |

## Miscellaneous

- |                                   |                                   |
|-----------------------------------|-----------------------------------|
| 4" Oster Pipe Threader, 90%.      | Cleve. Punch & Shear, 12" throat. |
| 3" Cutting-off Mch., dbl. cr. sl. | Beaudry Power Hammer.             |
| Nos. 1-2-3-4 LaPointe Broaches.   | Large assortment Bolt Cutters.    |

Write for List of Machinery on Hand

**A. P. Marsh Machinery Co.,** <sup>4900</sup> West 73rd St., **Cleveland, O.**

## Special Bargains in Used Machine Tools

1—30"x18' LeBlond Heavy Duty Quick Change Gear Engine Lathe with steady rest, guards, 24" face plate, pump and piping, motor driven by Westinghouse 15 h. p. 220-volt, d. c. ....	\$1500.
1—12"x48" Modern Plain Cylindrical Grinder, carrying wheel 18" dia. 2" wide, 5" hole, and with self contained counter-shaft for belt drive.....	650.
1—No. 205 Rivett Hand Radial Grinder with equipment.....	500.
1—No. 2 Diamond Automatic Surface Grinder, belt driven, with pump and water guards.....	750.
1—1½" National Bolt Cutter, with equipment.....	325.
1—Cleveland Horizontal Boring Machine, with 2½" diameter bar, speed box drive with friction clutch pulley, rectangular table 20"x42" having 4-T slots.....	750.
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1—XC36" Pexto Gap Foot Power Squaring Shear, 16 ga. cap. ....	125.
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 60"x 26' Niles T. G., Cone.

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 36"x 36"x 10' Niles, 4 Heads.  
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 38"x 38"x 16' Niles, 3 Heads.  
 42"x 42"x 12' Niles, 4 Heads.  
 42"x 42"x 14' Pond, 3 Heads.  
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24" throat Morgan double end, capacity 5/16"x24".  
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600, 800, 1000 and 1500 lb. agl. frame.  
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- Taft-Peice Thread Miller.
- 36" Gisholt Boring Mill.
- No. 14 Natco 16-spd. rect. head.
- 30x30x8 Cleve. open side planer.

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## Expiration of warehouse lease compels us to offer these very good tools cheap!

Betts 110" Vertical Boring Mill.....	\$5800.
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Becker type AB Vertical Miller.....	950.
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6, 8 and 10-spindle Nut Tappers, Acme and National.

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22" Barnes All Geared Drill.

No. 13 Brown & S. Gear Cutter.

36" G. & E. Gear Cutter.

No. 1 Campbell Nibbler.

No. 2 Campbell Nibbler.

84" Diamond Face Grinder.

2½" Murchey Double Spindle.

Nipple Machines.

No. 2 Pl. Cincinnati Mill S. P. D.

No. 3 Pl. Cincinnati Mill, S. P. D.

No. 3S Pl. Cincinnati Mill S.P.D.

No. 3 Kempsmith Plain Mill.

20" G. & E. Shaper.

3" American Radial.

20"x8" American Lathe, Geared Head.

14"x6" American Lathe, Geared Head.

14"x6" Wolcott Lathe.

16"x10" Champion Lathe.

No. 2 Mitts & Merrill Keyseater.

No. 4 Greenard Arbor Press.

**Ogden R. Adams Company, Inc.**

ROCHESTER, N. Y.



# Some of Our Specials —

## Punch Presses

- No. 169 $\frac{3}{4}$  Toledo toggle press, strokes 26" and 14".
- No. 209 Stiles & Parker toggle press, strokes 36" and 22".
- No. 69 Stoll tie rod frame, geared, 8" stroke.
- No. 42 Robinson double crank, geared, 2" stroke.
- No. 4 Loshbough-Jordan.
- No. 20 Bliss inclinable, 3" stroke.
- No. 2 R. & K. horn press, 2" stroke.
- No. 59 Bliss Embossing, 200 ton capacity.

## Other Machines

- 14"x6' Hendey Lathes, tie bar head, quick change (5).
- 20"x10' American geared head, quick change Lathe.
- 21" Gisholt Turret Lathe, latest type.
- 51" Niles Vertical Boring Mill, two heads.
- 6' Pond Boring Mill, motor drive.
- 10' Pond Boring Mill, motor drive.
- 24" Bullard Vertical Turret Lathe.
- No. 3 Cincinnati Hi-power Vertical Miller.
- No. 3 Cincinnati Plain Millers, (3).
- $\frac{3}{4}$ "-7" Cleveland model A auto. screw machines, serials 27360 to 30560.
- 16"x48" Landis Crank Pin Grinder, latest type.
- 36" Cincinnati Back Geared Drill, tapping attachment.

## Many Others—

*Send for Illustrated List today*

58"x56"x14' Gorton Planer, 4 heads, 35 H. P.,  
General Electric, reversing motor drive, NEW,  
NEVER USED, at half price of a new one.

# A. D. White Machinery Co.

108-114 N. Jefferson St.,

CHICAGO, ILL.



## —speaking of Dust Collectors

*Knickerbocker asks:—*

WHEN a number of the biggest plants in the country use from 15 to 35 of a certain kind of Dust Collector;

WHEN users write in and say that this Collector is saving nearly half the power formerly used;

WHEN some firms have had no repairs whatever on this Collector after years of steady use—

DOESN'T it begin to look as though there was something *unusually good* about that Collector?

Well, the "Rarefied" Dust Collector is exceptionally efficient and economical. It serves better and longer.

Our Booklet tells about this superior Collector in an interesting way. Let us mail you a copy.

**THE KNICKERBOCKER COMPANY**  
JACKSON, MICH.



## Lever Punch Press for Only \$32

### 5,000 Lbs. Capacity

*for* **Puncturing  
Blanking  
Forming**

Many light operations can be done by amateur mechanics—and others. Will cut sheet metal 6 or 7 inches cutting edge of  $\frac{1}{32}$ " or less thickness. Many in use. Dies made to order to fit this press and larger dies. Weight 35 lbs. Height 11". Lever 36" Will punch small holes through  $\frac{1}{8}$ " metal.



*Stamping is Lowest Cost  
in Production*

**BAUM'S METAL SPECIALTIES**, 1523 Wyandotte St.,  
KANSAS CITY, MO.  
Makers of Gears, Models, Brass Work. Manufacturing Dies for 30 years. Orders Solicited.

## Bargains in Our Surplus Used Machine Tools

### **LATHES—**

Headey 14"x6" P. R., S. B. G., old.  
Schumacher, Boye & Emmes 20"x10" H. S., C. R., D. B. G.,  
Q. C., 3-step cone.  
Walcott 26"x10" H. S., C. R., D. B. G., Q. C., with 22"  
four-jaw chuck.  
Bench Lathe, 10x24" between centers, hand feed.

### **SCREW MACHINES—**

Gridley Automatic 4 $\frac{1}{2}$ " S. S., lot of equipment, A-1 condition.  
J. & L. Chucking, 2".  
Brown & Sharpe Screw Machine, 6-hole turret No. 1.

### **MILLING MACHINES—**

American No. 1 $\frac{1}{2}$  Plain Back Geared.  
Cincinnati No. 4 Plain.

### **GRINDERS—**

No. 70 Heald Internal Grinder with attachments.  
Pratt & Whitney 48x6 Universal Cylindrical Grinder.  
Wells Tool Grinder and attachments.

### **DRILL PRESSES—**

Kerns Drill Press, B. G., L. S. P. M. Q. R.

### **BORING MACHINE—**

Niles Horizontal, knee type, 2 $\frac{1}{2}$ " bar, lot of equipment.

**A. V. Carroll Machine Tool Co.**  
Highland Ave., Norwood, Cincinnati, O.

# Classified Finding Index

**Air Compressors, Electric**  
Petrick Bros., 2226 Belmont Ave., Chicago

**Air Guns**  
Powell Co., Wm., Cincinnati

**Angle Plates**  
Germanow-Simon Mch. Co., Rochester, N. Y.

**Arbors, Solid**  
Nicholson & Co., W. H., Wilkes-Barre, Pa.

**Auto-Gages For Dies**  
Danly Machine Specialties, Inc., 4913 Lincoln Ave., Chicago

**Automatics**  
National Acme Company, Cleveland, O.  
New Britain Machine Co., New Britain, Conn.

**Balancing Ways**  
Anderson Bros. Mfg. Co., Rockford, Ill.  
Bousher Co., N. P., South Bend, Ind.

**Balls, Bearing and Burnishing**  
Abbott Ball Co., Hartford, Conn.

**Band Saw Machines, for Metal**  
Armstrong-Blum Mfg. Co., 341 N. Francisco Ave., Chicago  
Porter-Cable Machine Co., Syracuse, N. Y.

**Barrels, Tumbling**  
Abbott Ball Co., Hartford, Conn.  
Scully-Jones & Co., 2012 W. 13th, Chicago

**Belt Shifters**  
Artison Mfg. Co., Cincinnati, O.  
Resnor Mfg. Co., Mercer, Pa.

**Bench Legs, Steel**  
New Britain Mch. Co., New Britain, Conn.

**Bending Machines, Hand and Power**  
Armstrong-Blum Mfg. Co., 341 N. Francisco Ave., Chicago  
Hendley & Whittemore Co., Beloit, Wis.  
Lewthwaite Mch. Co., T. H. 417E, 31st, N. Y.  
Lourie Hydraulic Co., Springfield, Ill.  
Pedrick Tool & Machine Co., Philadelphia

**Bending Rolls**  
Hendley & Whittemore Co., Beloit, Wis.

**Bolt and Nut Machinery**  
Economy Engineering Co., Willoughby, O.  
Foote-Burt Co., Cleveland, O.

**Boring Bars**  
Pedrick Tool & Machine Co., Philadelphia

**Boring Bars, Cylinder**  
Pedrick Tool & Machine Co., Philadelphia

**Boring, Drilling & Milling Machines**  
Lands Tool Co., Waynesboro, Pa.

**Boring Machines, Horizontal**  
Avey Drilling Machine Co., Cincinnati  
Pedrick Tool & Machine Co., Philadelphia

**Boring Tools**  
Maxwell Products Co., Cleveland, Ohio.  
Ribbs & Gray, La Porte, Ind.

**Boring and Turning Machines, Vertical**  
Cincinnati Planer Co., Cincinnati, Ohio

**Bulldozers, Hydraulic**  
Lourie Hydraulic Co., Springfield, Ill.

**Burnishing Equipment, Ball**  
Abbott Ball Co., Elmwood, Conn.

**Case-Hardening Compound**  
Kassett Company, 2 & 4 Stone St., New York

**Centers, Tailstock**  
Kell Manufacturing Co., Newark, N. J.

**Chucking Machines**  
National Acme Company, Cleveland, O.  
New Britain Mch. Co., New Britain, Conn.  
Springfield Machine Tool Co., Springfield, O.

**Chucks, Collet**  
Ames Co., B. C., Waltham, Mass.  
Hardings Brothers, Inc., 1770 Berteau Ave., Chicago

**Chucks, Drill**  
Eastern Tube & Tool Co., Inc., 580 Johnson Ave., Brooklyn, N. Y.  
Jacobs Mfg. Co., Hartford, Conn.  
Scully-Jones & Co., 2012 W. 13th, Chicago  
Titan Tool Co., Erie, Pa.

**Chucks, Drill and Tap**  
Scully-Jones & Co., 2012 W. 13th, Chicago

**Chucks, Keyway Cutting**  
Scully-Jones & Co., Ry. Exch. Bldg., Chicago

**Chucks, Magnetic**  
J. & H. Electric Co., Providence, R. I.

**Clamps, Die**  
Danly Machine Specialties, Inc., 4913 Lincoln Ave., Chicago

**Clutches, Friction**  
Conway Clutch Co., Cincinnati, O.  
Edgemont Machine Co., Dayton, O.

**Cold Saws**  
Burke Machine Tool Co., Conneaut, Ohio

**Collets**  
Ames Co., B. C., Waltham, Mass.  
Hardings Brothers, Inc., 1770 Berteau Ave., Chicago

**Contract Work Wanted**  
Burke Machine Tool Co., Conneaut, O.

**Counterbores and Spot Facers**  
Glenzer Co., J. C., Detroit, Mich.

**Couplings, Friction Clutch**  
Conway Clutch Co., Cincinnati, O.

**Cranes, Portable**  
Canedy-Otto Mfg. Co., Chicago Heights, Ill.  
Canton Foundry & Mch. Co., Canton, Ohio

**Crank Pin Turning Machine**  
Pedrick Tool & Machine Co., Philadelphia

**Cutters, Keyseating**  
Davis Keyseater Co., Rochester, N. Y.  
Scully-Jones & Co., 2012 W. 13th, Chicago

**Cutters, Milling**  
Genesee Mfg. Co., Rochester, N. Y.

**Cylinder Boring Machines, Portable**  
Pedrick Tool & Machine Co., Philadelphia

**Demagnetizers**  
J. & H. Electric Co., Providence, R. I.

**Dial Indicators**  
Federal Precision Corp'n, Providence, R. I.

**Die Heads, Threading, Self Opening**  
National Acme Company, Cleveland, O.

**Die Sets**  
Danly Machine Specialties, Inc., 4913 Lincoln Ave., Chicago

**Drill Racks**  
Peerless Machine Co., Racine, Wis.

**Drilling Machine Heads, Multiple**  
Gateman Mfg. Co., W., Manitowoc, Wis.  
United States Drill Head Co., Cincinnati

## Classified Finding Index

### Drilling Machines, Bench

Amen Co., B. C., Waltham, Mass.  
Avey Drilling Machine Co., Cincinnati  
Burke Machine Tool Co., Conneaut, Ohio  
Canedy-Otto Mfg. Co., Chicago Heights, Ill.  
Gaterman Mfg. Co., W., Manitowoc, Wis.  
Sigourney Tool Co., Hartford, Conn.  
Winterhoff Tool & Machine Co., Elkhart, Ind.  
Taylor & Fenn Co., Hartford, Conn.

### Drilling Machines, Horizontal

Gaterman Mfg. Co., W., Manitowoc, Wis.

### Drilling Machines, Multiple Spindle

Avey Drilling Machine Co., Cincinnati  
Foote-Burt Co., Cleveland, O.  
Foodick Machine Tool Co., Cincinnati, O.  
Gaterman Mfg. Co., W., Manitowoc, Wis.  
Sigourney Tool Co., Hartford, Conn.  
Taylor & Fenn Co., Hartford, Conn.

### Drilling Machines, Portable Electric

Independent Pneumatic Tool Co., 600 W. Jackson Blvd., Chicago  
Stow Flexible Shaft Co., Philadelphia, Pa.  
Strand Co., N. A., 5001 N. Lincoln St., Chicago  
Winterhoff Tool & Machine Co., Elkhart, Ind.  
Wisconsin Electric Co., Racine, Wis.

### Drilling Machines, Post

Canedy-Otto Mfg. Co., Chicago Heights, Ill.

### Drilling Machines, Radial

Canedy-Otto Mfg. Co., Chicago Heights, Ill.  
Foodick Machine Tool Co., Cincinnati, O.  
Taylor & Fenn Co., Hartford, Conn.

### Drilling Machines, Sensitive

Avey Drilling Machine Co., Cincinnati  
Burke Machine Tool Co., Conneaut, Ohio  
Canedy-Otto Mfg. Co., Chicago Heights, Ill.  
Foote-Burt Co., Cleveland, O.  
Foodick Machine Tool Co., Cincinnati, O.  
Gaterman Mfg. Co., W., Manitowoc, Wis.  
Leland-Gifford Co., Worcester, Mass.  
Muehlmann, Adolph, Cincinnati, O.  
Sigourney Tool Co., Hartford, Conn.  
Taylor & Fenn Co., Hartford, Conn.  
U. S. Machine Tool Co., Cincinnati, O.  
Wisconsin Electric Co., Racine, Wis.

### Drilling Machines, Vertical

Avey Drilling Machine Co., Cincinnati  
Canedy-Otto Mfg. Co., Chicago Heights, Ill.  
Foote-Burt Co., Cleveland, O.  
Foodick Machine Tool Co., Cincinnati, O.  
Gaterman Mfg. Co., W., Manitowoc, Wis.  
Leland-Gifford Co., Worcester, Mass.  
Sigourney Tool Co., Hartford, Conn.  
Taylor & Fenn Co., Hartford, Conn.

### Drills, Twist

Cleveland Twist Drill Co., Cleveland, O.

### Dust Handling Equipment

Knickerbocker Co., Jackson, Mich.

### Emery Wheel Dressers and Cutters

Precision Truing Machine & Tool Co., Cincinnati, O.

Taylor & Fenn Co., Hartford, Conn.

Western Tool & Mfg. Co., Springfield, O.

### Feeders, Oil and Soda Water

New Britain Machine Co., New Britain, Conn.

### Filing Machines, Die

Amen Co., B. C., Waltham, Mass.

### Filing Room Equipment

Wardwell Mfg. Co., Cleveland, O.

### Flexible Shafts

Strand Co., N. A., 5001 N. Lincoln St., Chicago

### Forges

Canedy-Otto Mfg. Co., Chicago Heights, Ill.

### Forgings, Hollow Bored

American Hollow Boring Co., Erie, Pa.

### Furniture, Machine Shop

New Britain Machine Co., New Britain, Conn.  
Western Tool & Mfg. Co., Springfield, O.

### Gauges, Dial

Amen Co., B. C., Waltham, Mass.  
Federal Products Corp'n, Providence, R. I.

### Gauges, Piston and Piston Ring

Federal Products Corp'n, Providence, R. I.

### Gauges, Thread

Federal Products Corp'n, Providence, R. I.

### Gears

Boston Gear Works Sales Company, Norfolk  
Dennis, Mass.

### Grinding Machines, Belt

Gallmeyer & Livingston Co., Grand Rapids, Mich.  
Peerless Surfacing Machine Co., Troy, N. Y.  
Walls Sales Corp., 96 Warren St., New York

### Grinding Machines, Bench

Bodine Electric Co., 2256 W. Ohio St., Chicago  
Gallmeyer & Livingston Co., Grand Rapids, Mich.

### Grinding Machines, Cutter, Reamer and Tool

Gallmeyer & Livingston Co., Grand Rapids, Mich.  
Jarecki Mch. & T. Co., Grand Rapids, Mich.

Landis Tool Co., Waynesboro, Pa.  
LeBlond Mch. Tool Co., R. K., Cincinnati, O.  
Thompson Grinder Co., Springfield, Ohio  
Wilmarth & Morman Co., Grand Rapids, Mich.

### Grinding Machines, Cylindrical

Jarecki Mch. & T. Co., Grand Rapids, Mich.  
Landis Tool Co., Waynesboro, Pa.  
Thompson Grinder Co., Springfield, Ohio

### Grinding Machines, Die

Gallmeyer & Livingston Co., Grand Rapids, Mich.

Jarecki Mch. & T. Co., Grand Rapids, Mich.  
Thompson Grinder Co., Springfield, Ohio  
Wilmarth & Morman Co., Grand Rapids, Mich.

### Grinding Machines, Disc

Gallmeyer & Livingston Co., Grand Rapids, Mich.

Porter Cable Machine Co., Syracuse, N. Y.

### Grinding Machines, Drill

Gallmeyer & Livingston Co., Grand Rapids, Mich.  
Wilmarth & Morman Co., Grand Rapids, Mich.

### Grinding Machines, Face

Taylor & Fenn Co., Hartford, Conn.

### Grinding Machines, Internal

Landis Tool Co., Waynesboro, Pa.  
Taylor & Fenn Co., Hartford, Conn.  
Thompson Grinder Co., Springfield, Ohio  
Wilmarth & Morman Co., Grand Rapids, Mich.

### Grinding Machines, Portable Electric

Bodine Electric Co., 2256 W. Ohio St., Chicago  
Independent Pneumatic Tool Co., 600 W. Jackson Blvd., Chicago  
Porter-Cable Machine Co., Syracuse, N. Y.

Service Tool, Die & Mfg. Co., 2256 Walnut Street, Chicago

Stow Flexible Shaft Co., Philadelphia, Pa.  
Strand Co., N. A., 5001 N. Lincoln St., Chicago  
Wisconsin Electric Co., Racine, Wis.

### Grinding Machines, Snagging

Gallmeyer & Livingston Co., Grand Rapids, Mich.

Jarecki Mch. & T. Co., Grand Rapids, Mich.

### Grinding Machines, Surface

Gallmeyer & Livingston Co., Grand Rapids, Mich.

Thompson Grinder Co., Springfield, Ohio  
Wilmarth & Morman Co., Grand Rapids, Mich.

## Classified Finding Index

- Grinding Machines, Tap**  
Gallmeyer & Livingston Co., Grand Rapids, Mich.
- Grinding Machines, Tool**  
Taylor & Fenn Co., Hartford, Conn.
- Grinding Machines, Universal**  
Gallmeyer & Livingston Co., Grand Rapids, Mich.
- Lanolin Tool Co., Waynesboro, Pa.**  
Thompson Grinder Co., Springfield, Ohio  
Wilmarth & Morman Co., Grand Rapids, Mich.
- Hack Saw Blades**  
Peerless Machine Co., Racine, Wis.
- Hack Saw Machines**  
Armstrong-Blum Mfg. Co., 341 N. Francisco Ave., Chicago  
Peerless Machine Co., Racine, Wis.  
Racine Tool & Machine Co., Racine, Wis.
- Hammers, Air**  
Independent Pneumatic Tool Co., 600 W. Jackson Blvd., Chicago
- Hammers, Riveting**  
Independent Pneumatic Tool Co., 600 W. Jackson Blvd., Chicago
- Hoists**  
Ford Chain Block Co., Philadelphia, Pa.
- Hoists, Portable**  
Canton Foundry & Machine Co., Canton, Ohio
- Hydraulic Machinery**  
Laurie Hydraulic Co., Springfield, Ill.
- Keyseating Machines**  
Burr & Son, John T., Brooklyn, N. Y.  
Chattanooga Mch. Co., Chattanooga, Tenn.  
Davis Keyseater Co., Rochester, N. Y.  
National Machine Tool Co., Cincinnati
- Lathe Accessories and Attachments**  
Cinco Machine Tool Co., Cincinnati, O.  
Maxwell Products Co., Cleveland, Ohio.  
Sidney Machine Tool Co., Sidney, O.
- Lathe Turrets**  
Maxwell Products Co., Cleveland, Ohio.
- Lathes, Automatic Turret**  
National Acme Company, Cleveland, O.
- Lathes, Bench**  
Ames Co., B. C., Waltham, Mass.  
Hardinge Brothers, Inc., 1770 Berceau Ave., Chicago  
Monarch Machine Tool Co., Sidney, O.
- Lathes, Engine**  
Carroll Mch. Tool Co., A. V., Cincinnati, O.  
Cincinnati Lathe & Tool Co., Cincinnati, O.  
Cinco Machine Tool Co., Cincinnati, O.  
Hardinge Brothers, Inc., 1770 Berceau Ave., Chicago  
LeBlond Mch. Tool Co., B. K., Cincinnati, O.  
Monarch Machine Tool Co., Sidney, O.  
Porter Cable Machine Co., Syracuse, N. Y.  
Sebastian Lathe Co., Cincinnati, O.  
Sidney Machine Tool Co., Sidney, O.  
Springfield Machine Tool Co., Springfield, O.
- Lathes, Extension Bed Cap**  
Bahn-Larson Co., Cincinnati, O.
- Lathes, Fox Monitor**  
Barker Co., Wm., Covington, Ky.
- Lathes, Cap**  
Carroll Mch. Tool Co., A. V., Cincinnati, O.
- Lathes, Short Bed**  
Artisan Mfg. Co., Cincinnati, O.  
Monarch Machine Tool Co., Sidney, O.  
Porter Cable Machine Co., Syracuse, N. Y.  
Sidney Machine Tool Co., Sidney, O.
- Lathes, Turret**  
Monarch Machine Tool Co., Sidney, O.
- Mandrels, Expanding**  
Nicholson & Co., W. H., Wilkes-Barre, Pa.  
Western Tool & Mfg. Co., Springfield, O.
- Mandrels, Solid**  
Nicholson & Co., W. H., Wilkes-Barre, Pa.
- Milling Attachments**  
Burke Machine Tool Co., Connecticut, Ohio  
Kearney & Trecker Corp., Milwaukee, Wis.  
LeBlond Mch. Tool Co., B. K., Cincinnati, O.  
Porter Cable Machine Co., Syracuse, N. Y.  
Taylor & Fenn Co., Hartford, Conn.
- Milling Machine Spacing Washers**  
Maxwell Products Co., Cleveland, Ohio.
- Milling Machines, Bench**  
Ames Co., B. C., Waltham, Mass.  
Burke Machine Tool Co., Connecticut, Ohio
- Milling Machines, Hand**  
Burke Machine Tool Co., Connecticut, Ohio  
U. S. Machine Tool Co., Cincinnati, O.
- Milling Machines, Manufacturing**  
Kearney & Trecker Corp., Milwaukee, Wis.
- Milling Machines, Plain**  
Burke Machine Tool Co., Connecticut, Ohio  
Gallmeyer & Livingston Co., Grand Rapids, Mich.  
Kearney & Trecker Corp., Milwaukee, Wis.  
LeBlond Mch. Tool Co., B. K., Cincinnati, O.
- Milling Machines, Portable**  
Fedrick Tool & Machine Co., Philadelphia
- Milling Machines, Spline**  
Taylor & Fenn Co., Hartford, Conn.
- Milling Machines, Universal**  
Kearney & Trecker Corp., Milwaukee, Wis.  
LeBlond Mch. Tool Co., B. K., Cincinnati, O.
- Milling Machines, Vertical**  
Burke Machine Tool Co., Connecticut, Ohio  
Kearney & Trecker Corp., Milwaukee, Wis.  
LeBlond Mch. Tool Co., B. K., Cincinnati, O.  
Taylor & Fenn Co., Hartford, Conn.
- Mills, Adjustable Hollow**  
Genesee Mfg. Co., Rochester, N. Y.
- Motors, Electric**  
Reliance Electric & Eng. Co., Cleveland  
Wisconsin Electric Co., Racine, Wis.
- Nuts, Plain or Castellated**  
National Acme Company, Cleveland, O.
- Oil Cups**  
Gits Bros. Mfg. Co., 1940 S. Kilbourn Ave., Chicago
- Oil Extractors**  
Barrett Co., Leon J., Worcester, Mass.  
Tolhurst Machine Works, Troy, N. Y.
- Pattern Shop Machinery**  
Towsley Mfg. Co., John T., Cincinnati
- Pins, Leader and Dowel**  
Danly Machine Specialties, Inc., 4913 Lincoln Ave., Chicago
- Pipe Bending Machines**  
Fedrick Tool & Machine Co., Philadelphia
- Pipe Cutting and Threading Machines**  
Chicago Pipe Thread Co., Racine, Wis.
- Piston Machines**  
National Acme Company, Cleveland, O.
- Piston Ring Machines**  
National Acme Company, Cleveland, O.
- Planing Machines**  
Cincinnati Planer Co., Cincinnati, O.  
Cleveland Planer Co., Cleveland, O.

## Classified Finding Index

**Planers, Valve Seat, Portable**  
Fedrick Tool & Machine Co., Philadelphia

**Polishing and Buffing Machines**  
Cisco Machine Tool Co., Cincinnati, O.  
Independent Pneumatic Tool Co., 600 W. Jackson Blvd., Chicago  
New Britain Machine Co., New Britain, Conn.  
Wilmarth & Norman Co., Grand Rapids, Wis.  
Wisconsin Electric Co., Racine, Wis. [Wich.]

**Presses, Arbor**  
Atlas Press Co., Kalamazoo, Mich.  
Lourie Hydraulic Co., Springfield, Ill.  
Nicholson & Co., W. H., Wilkes-Barre, Pa.

**Presses, Broaching**  
Lourie Hydraulic Co., Springfield, Ill.

**Presses, Drawing**  
Lourie Hydraulic Co., Springfield, Ill.

**Presses, Flanging**  
Lourie Hydraulic Co., Springfield, Ill.

**Presses, Foot**  
Rockford Iron Works, Rockford, Ill.  
Taylor & Fenn Co., Hartford, Conn.

**Presses, Forcing**  
Lourie Hydraulic Co., Springfield, Ill.

**Presses, Forming**  
Lourie Hydraulic Co., Springfield, Ill.

**Presses, Power**  
Hendley & Whittemore Co., Beloit, Wis.  
Lourie Hydraulic Co., Springfield, Ill.  
Rockford Iron Works, Rockford, Ill.

**Presses, Punch**  
Haum's Metal Specialties, Kansas City, Mo.  
LaSalle Machine Works, 3013 S. LaSalle St., Chicago  
Lewthwaite Mch. Co., T. H., 417 E. 31st St., N. Y.  
Rockford Iron Works, Rockford, Ill.

**Presses, Screw**  
Jarecki Mch. & T. Co., Grand Rapids, Mich.  
Towsley Mfg. Co., John T., Cincinnati

**Presses, Wheel**  
Lourie Hydraulic Co., Springfield, Ill.

**Pulley Machinery**  
Avery Drilling Machine Co., Cincinnati

**Pulleys, Iron, Solid and Split**  
Conway Clutch Co., Cincinnati, O.

**Pumps, Exhaust**  
Patrick Bros., 2226 Belmont Ave., Chicago

**Pumps, Hydraulic**  
Lourie Hydraulic Co., Springfield, Ill.

**Pumps, Lubricant**  
Ruthman Machinery Co., Cincinnati, O.

**Punch Press Feeds**  
Rockford Iron Works, Rockford, Ill.

**Punch, Shear and Bender, Hand**  
Armstrong-Blum Mfg. Co., 341 N. Francisco Ave., Chicago

**Punches, Hand**  
Armstrong-Blum Mfg. Co., 341 N. Francisco Ave., Chicago  
Hendley & Whittemore Co., Beloit, Wis.  
Lewthwaite Mch. Co., T. H., 417 E. 31st St., New York  
Whitney Metal Tool Co., Rockford, Ill.

**Punches, Power**  
Hendley & Whittemore Co., Beloit, Wis.

**Punches and Dies**  
Hendley & Whittemore Co., Beloit, Wis.  
Lewthwaite Mch. Co., T. H., 417 E. 31st St., N. Y.  
Rockford Iron Works, Rockford, Ill.

**Racks, Bar Stock**  
New Britain Machine Co., New Britain, Conn.  
Yobe Supply Co., Wm. S., Canton, O.

**Reamers**  
Cleveland Twist Drill Co., Cleveland, O.

**Reamers, Adjustable**  
Schellenbach-Hunt Tool Co., Cincinnati, O.

**Reamer Holders**  
Nicholson & Co., W. H., Wilkes-Barre, Pa.

**Reels, Extension**  
Cincinnati Specialty Mfg. Co., Cincinnati, O.

**Riveting Machines**  
Grant Mfg. & Mch. Co., Bridgeport, Conn.

**Rod Cutters**  
Armstrong-Blum Mfg. Co., 341 N. Francisco Ave., Chicago  
Bench Machine Tool Co., Philadelphia, Pa.  
Hendley & Whittemore Co., Beloit, Wis.  
Lewthwaite Mch. Co., T. H., 417 E. 31st St., N. Y.

**Saw Sharpening Machines**  
Wardwell Mfg. Co., Cleveland, O.

**Scraping Machines, Hand & Pneumatic**  
Anderson Brothers Mfg. Co., Rockford, Ill.

**Screw Driving Machines, Automatic**  
Reynolds Machine Co., Masonville, Ohio

**Screw Machine Products**  
National Acme Company, Cleveland, O.

**Screw Machines, Automatic**  
National Acme Company, Cleveland, O.  
New Britain Mch. Co., New Britain, Conn.

**Screws**  
National Acme Company, Cleveland, O.

**Second-Hand Machinery**  
Adams Co., Ogden St., Rochester, N. Y.  
Baker, J. C., Columbus, O.  
Bath & Co., Cyril J., Cleveland, O.  
Bennett Mch. Co., 50 Church St., New York  
Botwinik Brothers, New Haven, Conn.  
Brown Machinery Co., St. Louis, Mo.  
Brownell Machinery Co., Providence, R. I.  
Cincinnati Lathe & Tool Co., Cincinnati, O.  
Cincinnati Machinery & Supply Co., Cincinnati, O.

Clark Machinery Co., Cleveland, O.  
Clinton Mch. Co., 125 S. Clinton, Chicago  
Co-Operative Machinery Co., Cleveland, O.  
Donahue Steel Products Co., 204 N. Jefferson St., Chicago  
Eastern Machinery Co., Cincinnati, O.  
Empire Machinery Exchange Company, Inc., Cleveland, Ohio  
Easley Machinery Co., E. L., 555 Washington Blvd., Chicago  
Fitzsimmons-Cole Mch. Co., Pittsburgh, Pa.  
Foster Machinery Co., Cleveland, O.  
Haetten & Co., J. E., Inc., 50 Church St., New York

Harris Bros. Co., 35th & Iron, Chicago  
Hill, Clarke & Co., 649 W. Washington Blvd., Chicago  
Hill, Clarke & Co., Inc., Boston, Mass.  
Hobbs Supply Co., W. H., Eau Claire, Wis.  
Hyman & Sons, Joseph, Philadelphia  
Industrial Plants Corporation, 25 Church St., New York

Johnson & Sons Machinery Co., New York  
Jones Machine Tool Co., Cincinnati, O.  
Kinsey Co., E. A., Cincinnati, O.  
Little Co., W. P., Cleveland  
Lucas & Son, J. L., Inc., Bridgeport, Conn.  
McCabe Lathe & Machinery Corp., J. J., 149 Broadway, New York  
McCoy-Brandt Mch. Co., Pittsburgh, Pa.

## Classified Finding Index

### Second-Hand Machinery—Continued

McDonald Machinery Co., St. Louis  
McMullen Mch. Co., Grand Rapids, Mich.  
Mar-Galbreath Mch. Co., Pittsburgh, Pa.  
Marsh, A. R., Cleveland, O.  
Marshall & Huesch Machinery Co., 17 S. Jefferson St., Chicago  
Midland Equipment Co., 612 W. Van Buren, Chicago  
Mid-West Machine Tool & Supply Co., Davenport, Ia.  
Molitor Machy. Co., Chas., 118 S. Clinton St., Chicago  
Monarch Machinery Co., Philadelphia, Pa.  
Morey and Co., Inc., 408 Broome St., N. Y.  
Morris Machine Tool Co., Cincinnati, O.  
Mutch & Merryweather Machinery Company, Cleveland, O.  
Niles Tool Works Co., Hamilton, O.  
Norton-Broadway Mch. Co., Cincinnati, O.  
O'Brien Machinery Co., Philadelphia  
Osborne & Sexton Machy. Co., Columbus, O.  
Orsatt & Co., D. O., Cleveland, O.  
Peninsular Machinery Co., Detroit, Mich.  
Rechtin & Bro., L. E., Cincinnati, O.  
Reeve-Fritts Co., 37 S. Desplaines, Chicago  
Relliance Mch. Sales Co., Pittsburgh, Pa.  
Rawlingson, D. E., Utica, N. Y.  
Russell Machine Co., Pittsburgh, Pa.  
Scott-Bansbach Mch. Co., 130 S. Clinton, Chicago  
Simmons Machine Tool Corp., Albany, N. Y.  
Smith Machinery Co., N. A., Syracuse, N. Y.  
Stocker-Rumely-Wacho Co., 117 N. Jefferson St., Chicago  
Stoehr Mch. Co., A. M., 560 W. Adams St., Chicago  
Strafer, A. F., 80 Church St., New York  
Strong, Carlisle & Hammond Co., Cleveland  
Syracuse Supply Co., Syracuse, N. Y.  
Taylor-Hall Welding Corp., Worcester, Mass.  
Tubor, Velick & Co., Inc., Lake & Desplaines Sts., Chicago  
Wartman, M. A., Cleveland, O.  
White Machy. Co., A. D., 108 N. Jefferson St., Chicago  
Winterer, Herman L., Philadelphia

### Shafts, Flexible

Staw Flexible Shaft Co., Philadelphia, Pa.

### Shafts, Steel

American Hollow Boring Co., Elys. Pa.

### Shaping Machines

Osborne & Sexton Machy. Co., Columbus, O.  
Rhodes Mfg. Co., Hartford, Conn.  
Smith & Mills Co., Cincinnati  
Springfield Machine Tool Co., Springfield, O.

### Shears, Hand

Armstrong-Blum Mfg. Co., 341 N. Francisco Ave., Chicago  
Handley & Whittemore Co., Beloit, Wis.  
Leathwaite Machine Co., F. H., 417 E. 51st St., New York  
Whitney Metal Tool Co., Rockford, Ill.

### Shears, Power

Handley & Whittemore Co., Beloit, Wis.

### Slotting Machines

Rhodes Mfg. Co., Hartford, Conn.

### Spacing Washers

Detroit Stamping Co., Detroit, Mich.

### Stools and Chairs, Factory

Chicago Wire Chair Co., 619 N. La Salle St., Chicago

### Straightening Machines

Springfield Machine Tool Co., Springfield, O.  
Towsley Mfg. Co., John T., Cincinnati  
Whitney Metal Tool Co., Rockford, Ill.

### Tap Extractors

Walton Co., Hartford, Conn.

### Tapping Machines and Attachments

Alto Mfg. Co., 1647 Wolfram St., Chicago  
Avery Drilling Machine Co., Cincinnati  
Bench Machine Tool Co., Philadelphia, Pa.  
Burke Machine Tool Co., Conneaut, Ohio  
Eastern Tube & Tool Co., Inc., 580 Johnson Ave., Brooklyn, N. Y.  
Gateman Mfg. Co., W., Manitowoc, Wis.  
Leland-Gifford Co., Worcester, Mass.  
Whitney Metal Tool Co., Rockford, Ill.

### Taps, Threading, Collapsing

Gateman Mfg. Co., W., Manitowoc, Wis.  
National Acme Company, Cleveland, O.

### Thread Dies

Colven, J. M., Yonkers, N. Y.

### Thread Milling Attachments

Cisco Machine Tool Co., Cincinnati, O.

### Threading Tools

Armstrong Bros. Tool Co., 308 N. Francisco Ave., Chicago  
Hart Mfg. Co., Cleveland, O.

### Tool Holders

Armstrong Bros. Tool Co., 308 N. Francisco Ave., Chicago  
Western Tool & Mfg. Co., Springfield, O.

### Tool Racks

Chicago Wire Chair Co., 619 N. La Salle St., Chicago

### Tools, Boring

Armstrong Bros. Tool Co., 308 N. Francisco Ave., Chicago

### Tools, Lathe and Planer

Armstrong Bros. Tool Co., 308 N. Francisco Ave., Chicago

### Tools, Machinists'

Armstrong Bros. Tool Co., 308 N. Francisco Ave., Chicago

### Tools, Spot Facing

Genese Mfg. Co., Rochester, N. Y.

### Travellers, I-Beam

Ford Chain Block Co., Philadelphia, Pa.

### Trucks, Machine Shop

New Britain Machine Co., New Britain, Conn.  
Towsley Mfg. Co., John T., Cincinnati

### Turntables

Canton Foundry & Machine Co., Canton, O.

### Universal Joints

American Tool Works, Inc., Hartford, Conn.  
Rorseon Mfg. Co., Inc., Torrington, Conn.  
Boston Gear Works Sales Company, Norfolk Downs, Mass.

### Valve Grinders

Independent Pneumatic Tool Co., 800 W. Jackson Blvd., Chicago

### Valves

Fowell Co., Wm., Cincinnati

### Vises, Drilling Machine

Armstrong-Blum Mfg. Co., 341 N. Francisco Ave., Chicago  
Armstrong Bros. Tool Co., 308 N. Francisco Ave., Chicago  
Germanow-Simon Mch. Co., Rochester, N. Y.

### Vises, Machinists'

New Britain Machine Co., New Britain, Conn.  
Western Tool & Mfg. Co., Springfield, O.

### Vises, Milling Machine

Germanow-Simon Mch. Co., Rochester, N. Y.

### Wood Working Machinery

Handley & Whittemore Co., Beloit, Wis.  
New Britain Machine Co., New Britain, Conn.  
Porter-Cable Machine Co., Syracuse, N. Y.  
Towsley Mfg. Co., John T., Cincinnati



# Index of Advertisers

<b>A</b>		<b>E</b>	
Abbott Ball Co.	44	Eastern Machinery Co.	106-107
Adams Co., Ogden R., Inc.	124	Eastern Tube & Tool Co., Inc.	55-59
Alto Manufacturing Co.	59	Economy Engineering Co.	7
American Hollow Boring Co.	64	Edgemont Machine Co.	60
American Tool Works, Inc.	78	Edgewater Steel Company	86
Ames Co., B. C.		Empire Mch. Exchange Co.	110
Anderson Bros. Mfg. Co.	76	Esley Machinery Co., E. L.	118
Armstrong-Blum Mfg. Co.	67		
Armstrong Bros. Tool Co.	34	<b>F</b>	
Artisan Manufacturing Co.	25	Federal Products Corporation	30
Atlas Press Co.	62	Fitzsimmons & Cole Mch. Co.	94
Avey Drilling Machine Co.	9	Foot-Burt Co.	8
		Ford Chain Block Co.	41
<b>B</b>		Fordick Machine Tool Co.	5
Barbour, Love & Woodward	107	Foster Machinery Co.	95
Barker & Co., Wm.	77		
Barrett Co., Leon J.	45	<b>G</b>	
Bath & Co., Cyril J.	82-83	Gallmeyer & Livingston Co.	15
Baum's Metal Specialties	127	Gateman Mfg. Co., W.	19
Beaudry Company, Inc.	81	Genesee Manufacturing Co.	29
Bench Machine Tool Co.	77	Germanow-Simon Machine Co.	
Bennett Machinery Co.	81	Gita Bros. Mfg. Co.	50
Bodine Electric Co.	42	Glenzer Co., J. C.	24
Borgeson Manufacturing Co.		Grant Mfg. & Machine Co.	58
Boston Gear Works Sales Co.	60		
Botwinik Brothers	81	<b>H</b>	
Bowsher Co., N. P.	76	Haetten & Co., J. E., Inc.	84
Brown Machinery Co.	96	Hardinge Brothers, Inc.	17
Brownell Machinery Co.	95	Harris Bros. Co.	117
Burke Machine Tool Co.	57	Hart Manufacturing Co.	61
Burt & Son, John T.	48	Hendley & Whittemore Co.	71
		Hill, Clarke & Co., Boston	96
<b>C</b>		Hill, Clarke & Co., of Chicago	102
Canedy-Otto Mfg. Co.	53	Hobbs Supply Co., W. H.	88
Canton Foundry & Mche. Co.	40	Hyman & Sons, Joseph	120
Carroll Machine Tool Co., A. V.			
	36-127	<b>I</b>	
Chattanooga Machinery Co.	49	Independent Pneumatic Tool Co.	56
Chicago Pipethread Machine Co.	61	Industrial Plants Corporation	121
Chicago Wire Chair Co.	74		
Chowning Regulator Corporation	88	<b>J</b>	
Cincinnati Lathe & Tool Co.	47	J. & H. Electric Co., Inc.	26
Cincinnati Mch. & Supply Co.	86	Jacobs Manufacturing Co.	68-69
Cincinnati Planer Co.	4	Jarecki Machine & Tool Co.	65
Cincinnati Specialty Mfg. Co.	72	Johnson & Sons Mch. Co., Wm. C.	98
Cisco Machine Tool Co.	30	Jones Machine Tool Co.	90
Clark Machinery Co.	81		
Cleveland Planer Co.	36	<b>K</b>	
Cleveland Twist Drill Co.	3	Kasnit Company	64
Cinton Machinery Co.	90	Kearney & Trecker Corporation	103
Colven, James M.	46	Kell Manufacturing Co.	46
Conway Clutch Co.	37	Kinsey Co., E. A.	114
Co-Operative Machinery Co.	122	Klauber, Edward L.	100
		Knickerbocker Co.	126
<b>D</b>			
Danly Machine Specialties, Inc.	73	<b>L</b>	
Davis Keyseater Co.	51	Landis Tool Co.	14
Detroit Stamping Co.	28	LaSalle Machine Works	66
Donahue Steel Products Co.	124	LeBlond Mche. Tool Co., R. K.	10

## Index of Advertisers—Continued

Leland-Gifford Co.....	13
Lewthwaite Machine Co., T. H.	78
Little Co., W. P.....	88
Lourie Hydraulic Co.....	62
Lucas & Son, J. L., Inc.....	96-100

### M

McCabe Lathe & Machinery Corporation, J. J.....	111
McCoy-Brandt Machinery Co.....	94
McDonald Machinery Company.....	100
McMullen Machinery Co.....	88
Marr-Galbreath Machinery Co.....	89
Marsh Machinery Co., A. R.....	113
Marshall & Huschart Mchy. Co.	120
Maxwell Products Co.....	33
Merkle-Korff Gear Co.....	101
Midland Equipment Co.....	116
Mid-West Machine Tool & Supply Co.....	122
Molitor Machinery Co., Chas.....	87
Monarch Machine Tool Co.....	47
Monarch Machinery Co.....	123
Morey and Co. Inc.....	119
Motch & Merryweather Mchy. Co.	108
Muehlmann, Adolph.....	52

### N

National Acme Company.....	6
Nat'l Mche. Tool Builders' Ass'n	
National Machine Tool Co.....	48
New Britain Machine Co.....	136
Nicholson & Co., W. H.....	63
Niles Tool Works Company.....	115
Norton-Broadway Mchy. Co.....	118

### O

O'Brien Machinery Co.....	83
Osborne & Sexton Mchy. Co.....	105
Oviatt & Co., D. C.....	101

### P

Pedrick Tool & Machine Co.....	31
Petrick Brothers.....	38
Peerless Machine Co.....	70
Peerless Surfacing Mche. Co., Inc.	20
Peninsular Machinery Co.....	84
Porter-Cable Machine Co.....	43
Powell Co., The Wm.....	58
Precision Truing Machine & Tool Company.....	27

### R

Racine Tool & Machine Co.....	72
Rahn-Larmon Co.....	11
Rechtin & Bro., Louis E.....	99
Reeve-Fritts Company.....	97
Reliance Elect. & Engineering Co.	2
Reliance Machinery Sales Co.....	85
Reynolds Machine Company.....	39

Reznor Manufacturing Co.....	22-23
Rhodes Manufacturing Co.....	18
Ribbe & Grey.....	34
Rockford Iron Works.....	66
Rowlingson, D. E.....	93
Russell Machine Co.....	104
Ruthman Machinery Co.....	38

### S

Schellenbach-Hunt Tool Co.....	80
Scott-Bansbach Machinery Co.....	99
Scully-Jones & Co.....	28
Sebastian Lathe Co.....	12
Second-Hand Machinery.....	81 to 127
Service Tool, Die & Mfg. Co.....	
Sidney Machine Tool Co.....	32
Sigourney Tool Co.....	54
Simmons Machine Tool Corp.....	112
Smith Machinery Co., H. A.....	116
Smith & Mills Co.....	32
Sommerfeld Machine & Mfg. Co.	91
Springfield Machine Tool Co.....	70
Stocker-Rumely-Wachs Co.....	114
Stoehr Machinery Co., A. M.....	99
Stow Flexible Shaft Co.....	44
Strafer, A. F.....	91-109
Strand & Co., N. A.....	43
Strong, Carlisle & Hammond Co...	97
Surplus Material & Mchy. Co.....	81
Syracuse Supply Company.....	86

### T

Taylor-Hall Welding Corporation	101
Taylor & Fenn Co.....	75
Thompson Grinder Co.....	42
Titan Tool Co.....	54
Tolhurst Machine Works.....	45
Towley Mfg. Co., John T.....	40
Tubor, Velick & Co., Inc.....	92

### U

United States Drill Head Co.....	52
United States Machine Tool Co...	56

### W

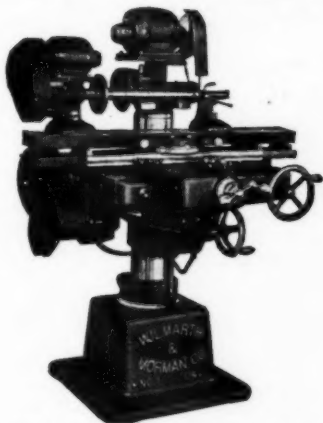
Walls Sales Corporation.....	26
Walton Co.....	57
Wardwell Manufacturing Co.....	35
Wertman, M. A.....	92
Western Tool & Mfg. Co.....	21
White Machinery Co., A. D.....	125
Whitney Metal Tool Co.....	74
Wilmarth & Morman Co.....	135
Winterer, Herman L.....	93
Winterhoff Tool & Machine Co.	24-68-69
Wisconsin Electric Co.....	16

### Y

Yoke Supply Co., Wm. S.....	50
-----------------------------	----

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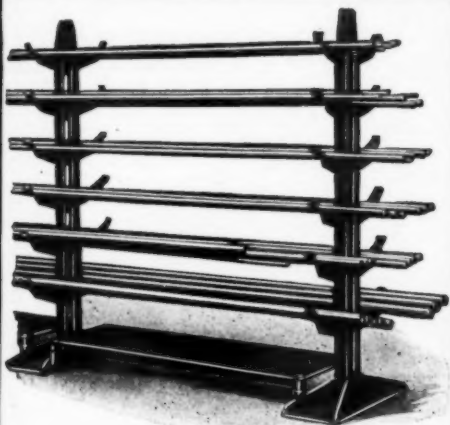
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